

27/09/2004

10071390

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1626KAS

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 Jul 12 BEILSTEIN enhanced with new display and select options,  
resulting in a closer connection to BABS  
NEWS 4 Jul 30 BEILSTEIN on STN workshop to be held August 24 in conjunction  
with the 228th ACS National Meeting  
NEWS 5 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display  
fields  
NEWS 6 AUG 02 CAPLUS and CA patent records enhanced with European and Japan  
Patent Office Classifications  
NEWS 7 AUG 02 The Analysis Edition of STN Express with Discover!  
(Version 7.01 for Windows) now available  
NEWS 8 AUG 04 Pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover! will change September 1, 2004  
NEWS 9 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage  
NEWS 10 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal  
status data from INPADOC  
NEWS 11 SEP 01 INPADOC: New family current-awareness alert (SDI) available  
NEWS 12 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 13 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX  
NEWS 14 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ  
NEWS 15 SEP 27 STANDARDS will no longer be available on STN  
NEWS 16 SEP 27 SWETSCAN will no longer be available on STN

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004

NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
specific topic.

All use of STN is subject to the provisions of the STN Customer  
agreement. Please note that this agreement limits use to scientific  
research. Use for software development or design or implementation  
of commercial gateways or other similar uses is prohibited and may  
result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

27/09/2004

10071390

FILE 'HOME' ENTERED AT 16:15:31 ON 27 SEP 2004

=> file reg

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY

TOTAL  
SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 16:15:42 ON 27 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 SEP 2004 HIGHEST RN 752189-88-1

DICTIONARY FILE UPDATES: 26 SEP 2004 HIGHEST RN 752189-88-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

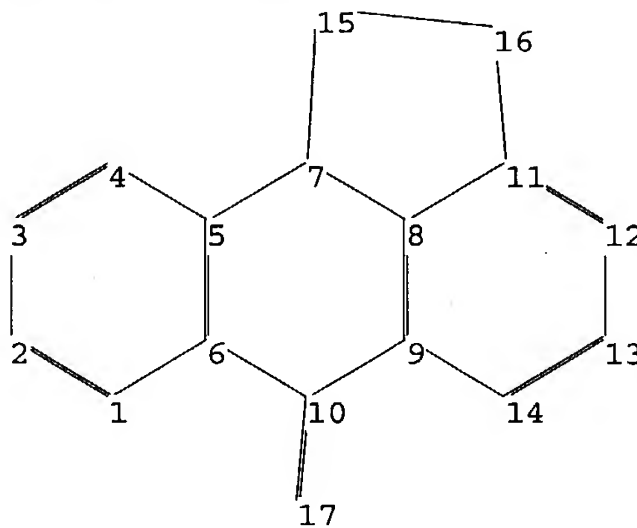
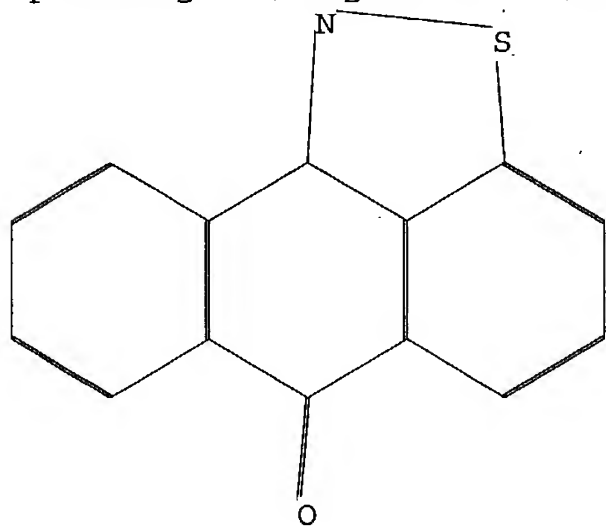
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10071390.str



chain nodes :

17

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

chain bonds :

10-17

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 11-12

11-16 12-13 13-14 15-16

exact/norm bonds :

5-7 6-10 7-8 7-15 9-10 10-17 11-16 15-16

27/09/2004

10071390

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

Match level :

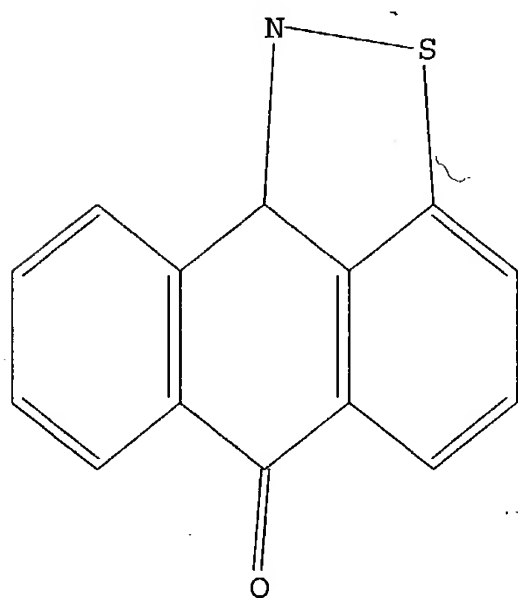
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 16:16:07 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 957 TO ITERATE

100.0% PROCESSED 957 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

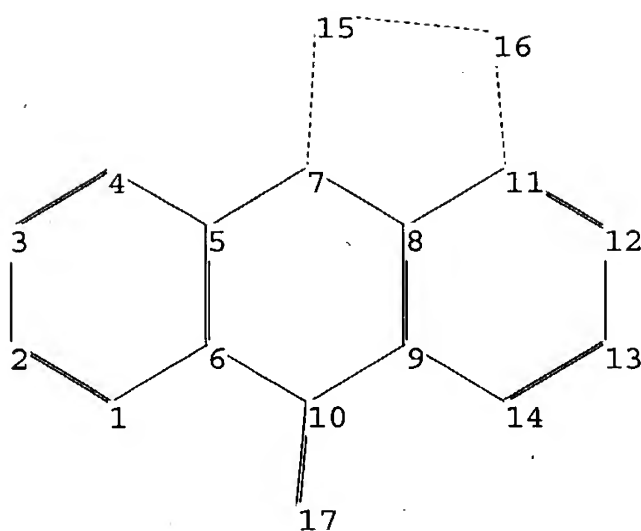
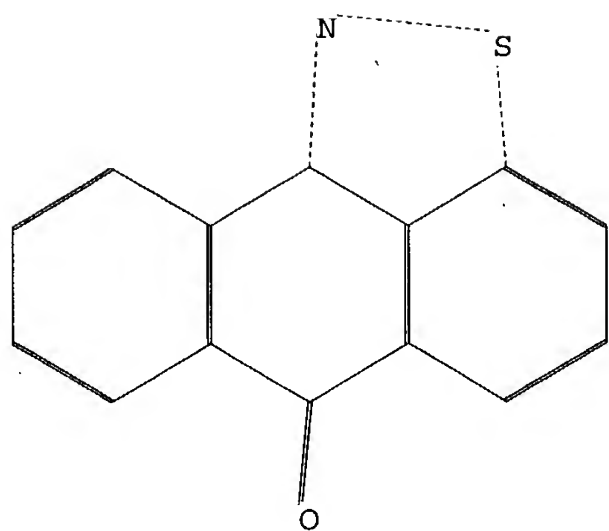
L2 0 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\100713901.str

27/09/2004

10071390



chain nodes :

17

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

chain bonds :

10-17

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 11-12  
11-16 12-13 13-14 15-16

exact/norm bonds :

5-7 6-10 7-8 7-15 9-10 10-17 11-16 15-16

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS

L3 STRUCTURE UPLOADED

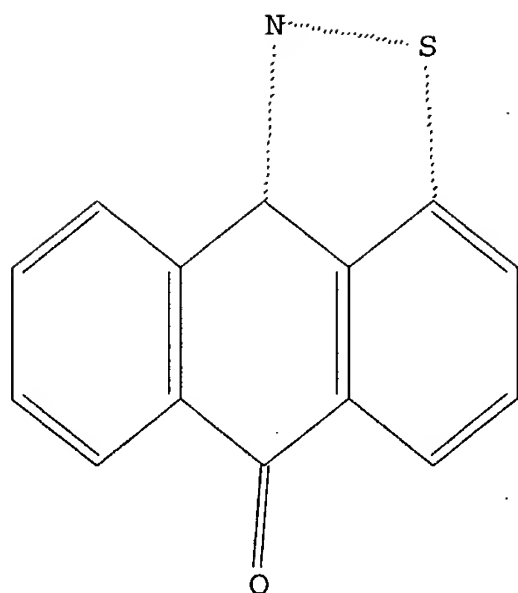
=> d

L3 HAS NO ANSWERS

L3 STR

27/09/2004

10071390



Structure attributes must be viewed using STN Express query preparation.

=> s l3 full

FULL SEARCH INITIATED 16:17:12 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 957 TO ITERATE

100.0% PROCESSED 957 ITERATIONS

218 ANSWERS

SEARCH TIME: 00.00.01

L4 218 SEA SSS FUL L3

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

311.26

311.47

FILE 'CAPLUS' ENTERED AT 16:17:18 ON 27 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 27 Sep 2004 VOL 141 ISS 14

FILE LAST UPDATED: 26 Sep 2004 (20040926/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

27/09/2004

10071390

=> s 14

L5 120 L4

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.88

312.35

FILE 'REGISTRY' ENTERED AT 16:18:23 ON 27 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 SEP 2004 HIGHEST RN 752189-88-1

DICTIONARY FILE UPDATES: 26 SEP 2004 HIGHEST RN 752189-88-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

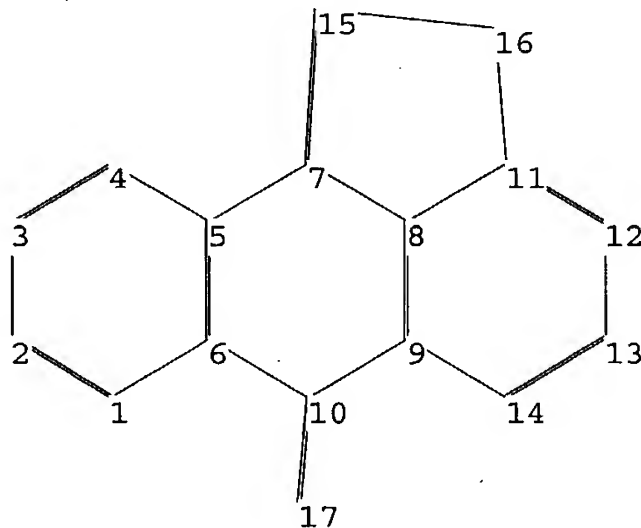
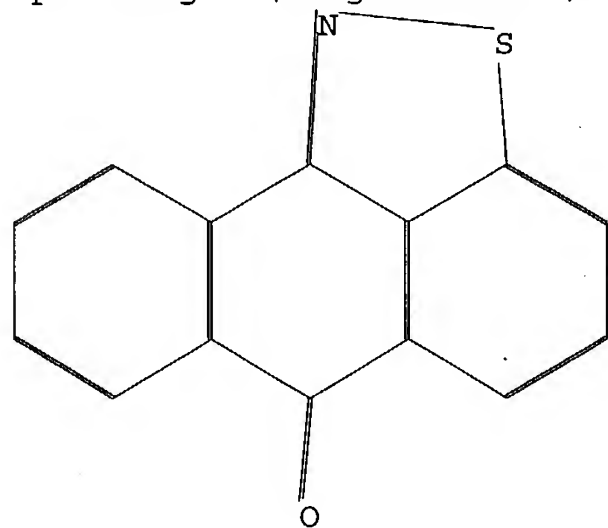
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\100713902.str



chain nodes :

17

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

chain bonds :

10-17

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 11-12

11-16 12-13 13-14 15-16

exact/norm bonds :

5-7 6-10 7-8 7-15 9-10 10-17 11-16 15-16

27/09/2004

10071390

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

Match level :

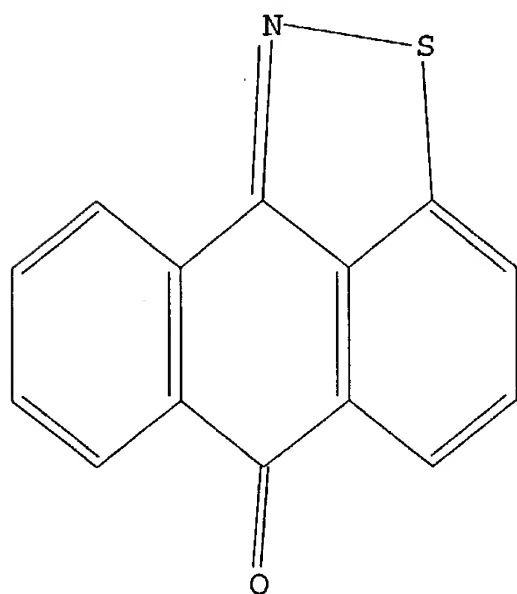
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS

L6 STRUCTURE UPLOADED

=> d

L6 HAS NO ANSWERS

L6 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 16 full

FULL SEARCH INITIATED 16:18:46 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 957 TO ITERATE

100.0% PROCESSED 957 ITERATIONS

218 ANSWERS

SEARCH TIME: 00.00.01

L7 218 SEA SSS FUL L6

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

155.42

467.77

FILE 'CAPLUS' ENTERED AT 16:18:56 ON 27 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is

27/09/2004

10071390

held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 27 Sep 2004 VOL 141 ISS 14  
FILE LAST UPDATED: 26 Sep 2004 (20040926/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 120' L7

=> d ibib abs hitstr 60-120



27/09/2004

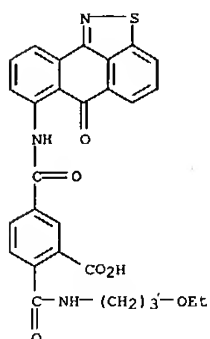
10071390

L8 ANSWER 60 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1975:44916 CAPLUS  
DOCUMENT NUMBER: 82:44916  
TITLE: Dyeing textile materials  
INVENTOR(S): Yamada, Eiji; Sueda, Yoshihisa; Imada, Kunihiko;  
Nohara, Noboru; Oida, Yohjii  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 39 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49007100	B4	19740218	JP 1970-114521	19701219

PRIORITY APPLN. INFO.: JP 1970-114521 19701219

GI For diagram(s), see printed CA Issue.  
AB Anthraquinone and azo dyes containing R group (R1 = H, Na, NH4) were water-soluble dyes, and dyeings were heat-treated to cyclize the dyes to insol.cyclic imides. For example, polyester fiber was dyed yellow with I [53697-28-2].  
IT 53697-28-2  
RL: USES (Uses)  
(cyclizable dye, for polyester fibers)  
RN 53697-28-2 CAPLUS  
CN Benzoic acid,  
2-[[[(3-ethoxypropyl)amino]carbonyl]-5-[[[(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



IT 53697-29-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethoxypropylamine)

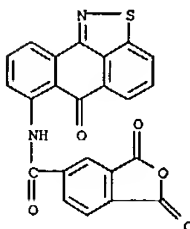
L8 ANSWER 61 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1974:493066 CAPLUS  
DOCUMENT NUMBER: 81:93066  
TITLE: Fiber-reactive, ring-closing, temporarily water-soluble disperse dyes  
INVENTOR(S): Yamada, Eiji; Akamatsu, Takashi  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49036984	A2	19740405	JP 1972-83073	19720818

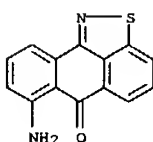
PRIORITY APPLN. INFO.: JP 1972-83073 19720818

AB A dye derivative having Ph group with 4-substitution of methylol carbamoyl, alkoxymethylcarbamoyl, carbamoyl, or alkylcarbamoyl group and 3-substitution of carboxy or carboxylate salt group is used to dye natural or synthetic textiles. Thus, yellow dye (I) [52434-55-6] was prepared by treating the corresponding anhydride with aqueous NH4OH then with HCHO. A 65:35 polyester-cotton blend textile was dyed with I at 120-30.deg. to dye the textile in level fast shades.  
1-Amino-4-(3-carboxy-4-hydroxymethylcarbamoylbenzamido)-2-(2-methoxyethoxy)anthraquinone [52434-52-3] (red dye),  
4-(3-carboxy-4-hydroxymethylcarbamoylbenzamido)-1-hydroxy-8-phenylaminoanthraquinone [52434-53-4] (blue dye), and  
4-(3-carboxy-4-hydroxymethylcarbamoylbenzamido)-1,5,8-trihydroxyanthraquinone [52434-54-5] (bluish red dye) were similarly prepared and used.  
IT 52434-55-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
RN 52434-55-6 CAPLUS  
CN Benzoic acid,  
2-[[[(hydroxymethyl)amino]carbonyl]-5-[[[(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

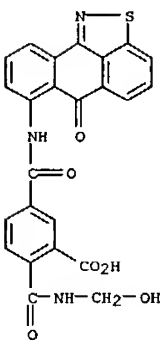
L8 ANSWER 60 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 53697-29-3 CAPLUS  
CN 5-Isobenzofurancarboxamide, 1,3-dihydro-1,3-dioxo-N-(6-oxo-6H-anthra[9,1cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)



IT 6337-02-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trimellitic anhydride chloride)  
RN 6337-02-6 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-amino- (8CI, 9CI) (CA INDEX NAME)



L8 ANSWER 61 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



27/09/2004

10071390

L8 ANSWER 62 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1974:72008 CAPLUS  
DOCUMENT NUMBER: 80:72008  
TITLE: Dyeing polyester fibers with acylaminoisothiazoloanthrone dye mixtures  
INVENTOR(S): Imada, Kunihiko; Nakagawa, Hiroyuki; Yamada, Eiji  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48073571	A2	19731004	JP 1972-4854	19720108

PRIORITY APPLN. INFO.: JP 1972-4854 19720108

AB Hydrophobic fibers were dyed with a 2-8:8-2 mixture of isothiazoloanthrone dye I (R = Me) (II) [50988-01-7] and isothiazoloanthrone dye I (R = Et) (III) [50988-02-8]. Thus, 100 parts polyester fiber dyed with 0.8 part II and 0.8 part III showed 50.2% higher dye pickup than

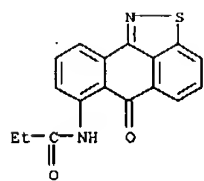
that dyed with 1.6 parts II or III alone.

IT 50988-02-8

RL: USES (Uses)  
(polyester fiber dyeing by, in presence of acetamidoisothiazoloanthrone)

RN 50988-02-8 CAPLUS

CN Propanamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)



IT 50988-01-7

RL: USES (Uses)  
(polyester fiber dyeing by, in presence of propionamidoisothiazoloanthrone)

RN 50988-01-7 CAPLUS

CN Acetamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)

L8 ANSWER 63 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1973:547423 CAPLUS  
DOCUMENT NUMBER: 79:147423  
TITLE: Vat dyes  
INVENTOR(S): Ulrich, Paul; Staeuble, Max  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G.  
SOURCE: Ger. Offen., 77 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2310305	A1	19730906	DE 1973-2310305	19730301
DE 2310305	C2	19860102		
CH 564592	A	19750731	CH 1972-3133	19720303
CA 998390	A1	19761012	CA 1973-164464	19730223
IN 139796	A	19760731	IN 1973-CA419	19730226
FR 2174876	A1	19731019	FR 1973-7178	19730228
US 3870717	A	19750311	US 1973-336574	19730228
CS 166670	P	19760329	CS 1973-1453	19730228
NL 7302901	A	19730906	NL 1973-2901	19730301
IT 979679	A	19740930	IT 1973-48538	19730301
BE 796180	A1	19730903	BE 1973-128285	19730302
GB 1429261	A	19760324	GB 1973-10193	19730302
ES 412222	A1	19760616	ES 1973-412222	19730302
JP 48102129	A2	19731222	JP 1973-24817	19730303
JP 60006974	B4	19850221		

PRIORITY APPLN. INFO.: CH 1972-3133 19720303  
CH 1973-855 19730122

AB Dyes containing R groups were prepared, where Q is the residue of a vat dye

polycyclic quinone (anthraquinone, phthaloylacridone, perylenetetracarboxylic diimide, anthraisoanthiazole), 2 (position 2, 3, and/or 5) is O or S, and the triazine ring is bonded through O or N to one or two polycyclic ring systems, e.g. Q. These compounds are fast vat dyes for cellulosic fibers and are also pigments, e.g. for PVC and lacquers. Thus, reaction of 4,6-bis(anthraquinon-1-ylamino)-s-triazine with 1-(salicyloylamino)anthraquinone at 205-10 deg. in PhNO<sub>2</sub> containing pyridine gave vat dye I (R = R<sub>1</sub> = anthraquinon-1-ylamino) [43212-10-8], deep yellow on cotton. Similarly, olive vat dye I (R = 3,4-phthaloyl-9(10H)-acridon-2-yl, R<sub>1</sub> =

6H-anthra[9,1-cd]isothiazol-6-on-7-yl) [43164-36-9] and 6 other dyes were prepared

IT 43164-36-9P

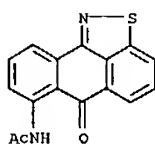
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

RN 43164-36-9 CAPLUS

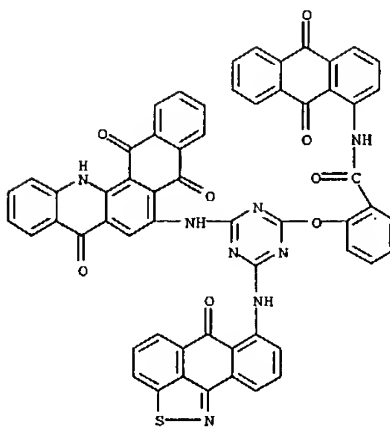
CN Benzamide, N-(9,10-dihydro-9,10-dioxo-1-anthracenyl)-2-[[4-[(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)amino]-6-[(5,8,13,14-tetrahydro-5,8,14-trioxonaphth[2,3-c]acridin-6-yl)amino]-1,3,5-triazin-2-yl]oxy]- (9CI)

(CA INDEX NAME)

L8 ANSWER 62 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 63 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

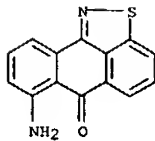


IT 6337-02-6

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dichloro[(phthaloylacridonyl)amino]triazine)

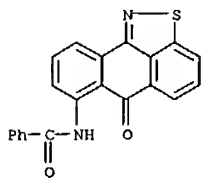
RN 6337-02-6 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-amino- (8CI, 9CI) (CA INDEX NAME)

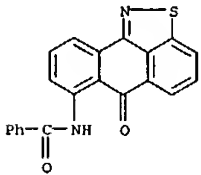


27/09/2004

L8 ANSWER 64 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1973:480162 CAPLUS  
DOCUMENT NUMBER: 79:80162  
TITLE: Sublimation transfer print process  
AUTHOR(S): Datye, V.; Pitkar, S. C.; Purao, U. M.  
CORPORATE SOURCE: Res. Cent., CIBA, Bombay, India  
SOURCE: Textilveredlung (1973), 8(5), 262-74  
CODEN: TXLVAE; ISSN: 0040-5310  
DOCUMENT TYPE: Journal  
LANGUAGE: German  
AB The kinetic and thermodynamic parameters of the sublimation transfer print process are similar to those of the thermofixation process and both processes occur through the vapor phase of the dye. A number of model compds. and dyes were deposited on the surface of a filter paper which was then heated in contact with various fabrics, e. g. poly(ethylene terephthalate), nylon 6, nylon 66, and cellulose triacetate and their blends with cotton and rayon, under a variety of conditions. Condensation of dye on the fiber surface, diffusion into the fiber, equilibrium and saturation of the fabric with the dye, and the reaction of a dye with nylon 66 fiber were determined.  
IT 10116-20-8  
RL: PROC (Process)  
(condensation and diffusion of, in sublimation transfer printing of textiles)  
RN 10116-20-8 CAPLUS  
CN Benzamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)

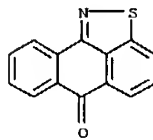


L8 ANSWER 66 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1972:503142 CAPLUS  
DOCUMENT NUMBER: 77:103142  
TITLE: Solvent dyeing  
AUTHOR(S): Datye, K. V.; Pitkar, S. C.; Purao, U. M.  
CORPORATE SOURCE: Res. Cent., CIBA, Bombay, India  
SOURCE: Teinture et Apprets (1972), No. 128, 7-31  
CODEN: TNAPA7; ISSN: 0040-2206  
DOCUMENT TYPE: Journal  
LANGUAGE: French  
AB Exhaust dyeing of poly(ethylene terephthalate), nylon 6 and cellulose triacetate with disperse dyes in perchloroethylene and other solvents was studied. Kinetic curves and dye sorption isotherms were constructed for varying conditions of temperature, solvent, concentration, etc. Dye solvent solubility, fiber saturation values, partition and diffusion coeffs., and thermodynamic coeffs. such as activation energy of diffusion, heat of solution, Gibbs free energy variations, and heat of dyeing, were calculated.  
IT 10116-20-8  
RL: USES (Uses)  
(solution properties and sorption isotherms of, for dyeing of synthetic fiber)  
RN 10116-20-8 CAPLUS  
CN Benzamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)



10071390

L8 ANSWER 65 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1973:43340 CAPLUS  
DOCUMENT NUMBER: 78:43340  
TITLE: Synthesis and spectroscopic studies of 1-arylbenzo[2,3]phenalenium cations and their heterocyclic analogs  
AUTHOR(S): Cherian, A. L.; Pandit, P. Y.; Seshadri, S.  
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Bombay, Bombay, India  
SOURCE: Indian Journal of Chemistry (1972), 10(4), 361-5  
CODEN: IJOCAP; ISSN: 0019-5103  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB 1-Arylbenzo[2,3]phenalenium derivs., e.g., I, were synthesized to study the effect of structural changes on absorption spectra. Cross conjugation effects due to auxochromes in the 1-aryl substituents and steric inhibition of such cross conjugation by an ortho substituent in the 1-aryl group were determined. Demethylation of some of the cations leads to the formation of a new class of mesionic substances, quinobenzanthrenes. Evidence of mesionic character was obtained from uv data. Heterocyclic analogs of the benzophenalenium system, e.g. II, were synthesized from thiophanthrone and isothiazolanthrene by reaction with various reactive aromatic substrates in the presence of phosphorus oxychloride, when 6-arylthio-phanthrenium and 6-aryl isothiazolanthrenium derivs. were obtained. Unsubstituted thiophanthrenium cation and isothiazolanthrenium cation were also synthesized. The uv spectral data of the various cations were obtained and discussed.  
IT 6313-41-3  
RL: RCT (Reactant); RACT (Reactant or reagent) (reduction of)  
RN 6313-41-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)



L8 ANSWER 67 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1972:47310 CAPLUS  
DOCUMENT NUMBER: 76:47310  
TITLE: Space-dyeing process for making multicolored yarn  
INVENTOR(S): Talamona, Francesco  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G.  
SOURCE: Patentschrift (Switz.), 10 pp.  
CODEN: SWXXAS  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 509834	A	19710715	CH 1968-509834	19680718
CH 6810746	A4	19710331	CH 1968-1074668	19680718
DE 1931418	A	19700122	DE 1969-1931418	19690620
FR 2013169	A5	19700327	FR 1969-23023	19690707
FR 2013169	B1	19730406		
GB 1269835	A	19720406	GB 1969-1269835	19690716
BE 736213	A	19700119	BE 1969-736213	19690717
NL 6911008	A	19700120	NL 1969-11008	19690717
AT 298383	B	19720510	AT 1969-6888	19690717
BR 6910840	A0	19730102	BR 1969-210840	19690718
PRIORITY APPLN. INFO.:			CH 1968-10746	19680718

AB Yarn and fabrics are space dyed to prepare multicolored products by using an apparatus comprising essentially a padder supplied with several (or many) storage tanks each filled with a different colored dye with flexible supply lines and control valves; the multicolor effect is achieved by moving the flexible supply lines and controlling the valves to form irregular stripes on the moving fabric. Thus, yellow dye (I) [26134-75-8] 20, red dye (II) [33832-43-8] 20, a bromination product of 1,5-dihydroxy-4,8-diaminoanthraquinone 20 parts were sep. mixed with water 680, Na alginate 200, Na nitrobenzenesulfonate 50, and a mixture of 60% pine oil, 30% olein, 6.6% caustic potash, and 3.4% water 50 parts to form 3 sep. dilute printing pastes. A polyester knit fabric was passed through the padder and colored in stripes of the different printing pastes; the fabric was dried, thermofixed at 200.deg., scoured, rinsed, and dried to give the space-dyed fabric.

27/09/2004

10071390

L8 ANSWER 68 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:510885 CAPLUS  
DOCUMENT NUMBER: 73:110885  
TITLE: Triazinylaminoanthraquinone dyes  
INVENTOR(S): Ulrich, Paul  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: Ger. Offen., 65 pp.  
CODEN: GWXXBX

DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2003364	A	19700806	DE 1970-2003364	19700126
CH 553839	A	19740913	CH 1969-1563	19690131
CS 172322	P	19761229	CS 1970-412	19700120
FR 2029759	A5	19701023	FR 1970-2685	19700126
CA 946840	A1	19740507	CA 1970-73	19700126
US-3684808	A	19720815	US 1970-6288	19700127
PL 80452	P	19750830	PL 1970-138467	19700129
BE 745214	A	19700730	BE 1970-745214	19700130
NL 7001385	A	19700804	NL 1970-1385	19700130
ES 376042	A1	19720516	ES 1970-376042	19700130
GB 1307932	A	19730221	GB 1970-4650	19700130
BR 7016460	A0	19730412	BR 1970-216460	19700130
JP 52020486	B4	19770603	JP 1970-8385	19700131
PRIORITY APPLN. INFO.:			CH 1969-1563	19690131
			CH 1969-18331	19691208

GI For diagram(s), see printed CA Issue.

AB The title compds. [I, R = H, X = p- or m-C6H4 or 4,2-(p-C6H4N:N)(HO3S)C6H3CH:CHC6H3(SO3H) (N:NC6H4-p)-2,4, and I, R = Cl, X = p-C6H4CMe2C6H4-p] are yellow vat dyes for cotton fibers. Thus, a mixture of hydroquinone, PhNO2, and 2 equivs. of the reaction product from 1 mole cyanuric chloride and 2 moles 1-aminoanthraquinone in the presence of pyridine gave yellow I (R = H, X = p-C6H4). Similarly prepared was II, a yellow pigment for poly(vinyl chloride).

IT 29723-19-1P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)

RN 29723-19-1 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7,7',7'',7'''-[(1-methylethylidene)bis(4,1-phenyleneoxy-1,3,5-triazine-6,2,4-triylidimino)]tetrakis- (9CI) (CA INDEX NAME)

L8 ANSWER 69 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:436550 CAPLUS  
DOCUMENT NUMBER: 73:36550  
TITLE: Basic dyes containing alkoxyamino groups  
INVENTOR(S): CIBA Ltd.  
SOURCE: Fr., 29 pp.  
CODEN: FRXXAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1572304		19690627		
CH 522715			CH	
DE 1769046			DE	
GB 1214403			GB	
US 3627751		19710000	US	
US 3860620		19750000	US	
PRIORITY APPLN. INFO.:			CH	19670404

GI For diagram(s), see printed CA Issue.

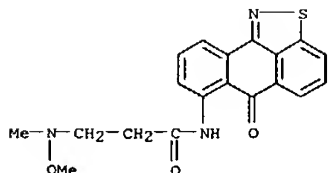
AB Azo, anthraquinone, nitro, and styryl dyes of the formulas [Q(CH2)nNMe2OR]+X- and Q(CH2)nNR(OR) where Q is a dye residue, n is 1 or 2, R is Me, Et, PhCH2 or (RR =) (CH2)3 or (CH2)4, and X- is an anion are prepared and used to dye polyacrylonitrile (I), polyester (II), and cellulose acetate (III) fibers. Thus, diazotized 4-O2NC6H4NH2 (IV) was coupled with PhN(CH2CH2CN)CH2CH2O2NCMe+ 4-MeC6H4SO3- to give V scarlet on I,

also prepared by quaternizing IV + PhN(CH2CH2CN)CH2CH2O2NCMe (scarlet on II and III) with 4-MeC6H4SO3Me.

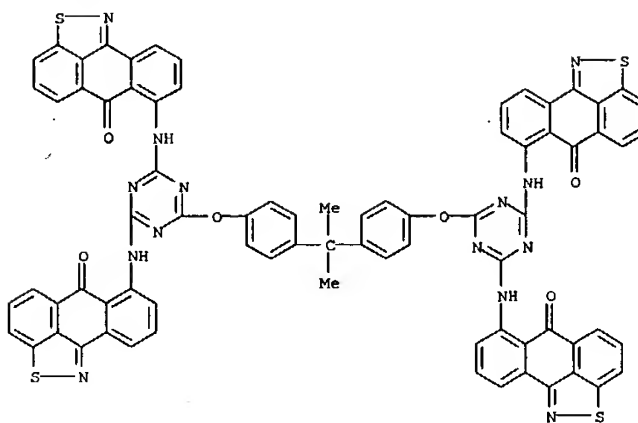
IT 29601-38-5P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)

RN 29601-38-5 CAPLUS

CN 3-(methoxymethylamino)-N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)



L8 ANSWER 68 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 70 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:404958 CAPLUS  
DOCUMENT NUMBER: 73:4958  
TITLE: Disperse and cationic dyes  
INVENTOR(S): Desai, Nalin B.; Yayaraman, Ponnusami; Naik, Navitral N.; Ramanathan, Visvanathan; Jenny, Walter; Artz, Klaus  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: Ger. Offen., 98 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1912123	A	19691023	DE 1969-1912123	19690311
CH 564588	A	19750731	CH 1968-3958	19680318
US 3679657	A	19720725	US 1969-806291	19690311
BE 729939	A	19690917	BE 1969-729939	19690317
NL 6904082	A	19690922	NL 1969-4082	19690317
FR 2004116	A5	19691121	FR 1969-7481	19690317
GB 1264982	A	19720223	GB 1969-1264982	19690317
CS 150247	P	19730904	CS 1969-1937	19690318
CS 150248	P	19730904	CS 1969-8240	19690318
US 3784559	A	19740108	US 1971-208410	19711215
US 3810932	A	19740514	US 1971-208417	19711215
US 3843625	A	19741022	US 1971-208464	19711215
US 3853841	A	19741210	US 1971-208418	19711215
US 3971740	A	19760727	US 1974-448305	19740305
PRIORITY APPLN. INFO.:			CH 1968-3958	19680318
			US 1969-806291	19690311
			US 1971-208468	19711215

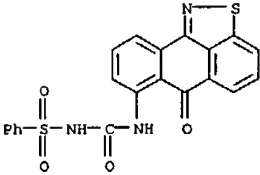
GI For diagram(s), see printed CA Issue.

AB Azo, styryl, nitro, and anthraquinone dyes containing an XCON(R)SO2 group (X = O, S, or NH, R = H, Me, Ph), useful for dyeing polyester, cellulose, acetate, and polyacrylonitrile fibers, were prepared. Thus, a mixture of 2,4-Me(HOCH2CH2NCH2)C6H3CH:C(CN)2 2.55, 4-MeC6H4SO2NCO 2.2, and PhCl 20 parts was refluxed for 150 min, PhCl distilled in vacuo, and the blue residue treated with MeOH to give I (R1 = Et, R2 = H), which dyed polyester fibers (II) from Cl2C:CCl2 greenish yellow shades. Similarly, I (R1 = CH2CH2O2CNHSO2C6H4Me-4, R2 = H) and I (R1 = Et, R2 = Me), greenish yellow on II, were prepared 4-O2NC6H4NH2 (13.8 parts) was diazotized and coupled with a solution of 37.3 parts PhN(CH2CH2CN)CH2CH2O2CNHSO2Ph to give an orange dye for II. Similarly, the following dyes were prepared (diazotized amine, coupling components, and shade given): 2,4-NC(O2N)C6H3NH2 (III), PhN(CH2CH2CN)CH2CH2O2CNMeSO2C6H4Me-4, red; 2,4-Cl(O2N)C6H3NH2 (IV), PhN(CH2CH2CN)CH2CH2O2CNPhSO2Ph, red; III, PhN(CH2CH2CN)CH2CH2O2CNMeSO2Ph, violet; IV, 3-(NCCH2CH2)2NC6H4NMeCONMeSO2Ph, red; 2,4,5-Cl(O2N)2C6H2NH2, 2,5-MeO(AcNH)C6H3N-(CH2CH2O2CNMeSO2Ph)2, blue; IV, 3-

27/09/2004

10071390

L8 ANSWER 70 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
ACCOCH2CH2)2NC6H4NMeCONMe2SO2Ph, red; 4-O2NC6H4NH2,  
PhN(CH2CH2CN)CH2CH2O2CNPhSO2-C5H4N-3, red; 4-PhNHCONMeSO2C6H4NH2-4,  
PhNETCH2CH2CN, yellow on II. PhSO2NCO (V) (8.25 parts) was added  
dropwise  
to a soln. of 9.6 parts 2,4-(O2N)2C6H3NHC6H4OCH2CH2OR-4 (VI, R = H) in  
200 parts PhCl and stirred at 100° for 8 hr. The product (5 parts) was  
dissolved in 45 parts Me2CO, treated with 20 parts K2CO3 and 20 parts  
MeI,  
and refluxed for 4 hr to give VI (R = CONMeSO2Ph), yellow on II.  
Similarly, other dyes were prepd. (reactants and shade given):  
2,4-HOCH2CH2O(O2N)C6H3NH2 → PhNETCH2CH2CN, V, MeI, scarlet; IV  
→ 1-(β-hydroxyethyl) - 3 - methyl - 5 - pyrazolone, V, MeI,  
yellow. 4-H2NC6H4COCH2NMe3+Cl- (4.57 parts) was diazotized and coupled  
with 7.74 parts PhN(CH2CH2CN)CH2CH2O2CNMeSO2-Ph (VII) to give an orange  
dye for polyacrylonitrile fibers (VIII). Similarly, diazotized  
2-amino-6-ethoxybenzothiazole was coupled with VII, and treated with  
Me2SO4 to give a blue dye for VIII. A mixt. of 1-amino-4-(p-  
tolylsulfonylamino)-2-(β-hydroxyethoxy)-anthraquinone 6.8,  
4-MeC6H4SO2NCO (IX) 6, and PhMe 200 parts was stirred for 7 hr to give X  
(R = H) (XI), an orange powder. A mixt. of XI, 2.5 parts Me2SO4, 2.7  
parts K2CO3, and 350 parts, Me2CO was refluxed for 24 hr to give X (R =  
Me), an orange-red powder, which dyes II reddish orange shades.  
Similarly, other dyes were prepd. (reactants and shade on II given):  
1-amino-4-hydroxy-2-(β-hydroxyethoxy)anthraquinone, IX, Me2SO4,  
bluish-red; 1-(methylamino)-4-aminoanthraquinone (XII), V, violet; XII,  
IX, violet; XII, V, Me2SO4, violet; 1-amino-4-hydroxyanthraquinone, V,  
orange; 5-amino-1,9-isothiazolanthron (XIII), V, yellow; XIII, IX,  
yellow; 1,4-dihydroxy-5,8-bis-(β-hydroxyethylamino)anthraquinone, V,  
Me2SO4, blue; 1,9-pyrazolanthron (XIV), V, yellow; XIV, V, Me2SO4,  
yellow; 5-(β-hydroxyethylamino)-1,9-pyrazolanthron, IX, Me2SO4,  
orange.  
IT 27078-11-1P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
RN 27078-11-1 CAPLUS  
CN Benzenesulfonamide, N-[[[6-oxo-6H-anthra[9,1-cd]isothiazol-7-  
yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

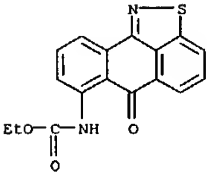


L8 ANSWER 71 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:22588 CAPLUS  
DOCUMENT NUMBER: 72:22588  
TITLE: 5-Aminoisothiazolanthron dye for polyester fibers  
INVENTOR(S): Mueller, Curt; Zirngibl, Ulrich  
PATENT ASSIGNEE(S): Sandoz Ltd.  
SOURCE: Ger. Offen., 13 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1900305	A	19690904	DE 1969-1900305	19690103
CH 497495	A	19701015	CH 1968-497495	19680110

PRIORITY APPLN. INFO.: CH 1968-347 19680110

GI For diagram(s), see printed CA Issue.  
AB A solution of 20 parts 5-aminoisothiazolanthron in 90 parts absolute  
tetrahydrofuran was treated with 10.2 parts ClCO2Et and 8.8 parts  
pyridine, refluxed for 3 hr, and cooled to give I, an ocher-yellow powder  
which dyes polyester fabrics a bright, full-bodied greenish yellow shade  
fast to light, washing, and reducing treatments.  
IT 24019-39-4P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
RN 24019-39-4 CAPLUS  
CN Carbamic acid, (6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-, ethyl ester  
(9CI) (CA INDEX NAME)

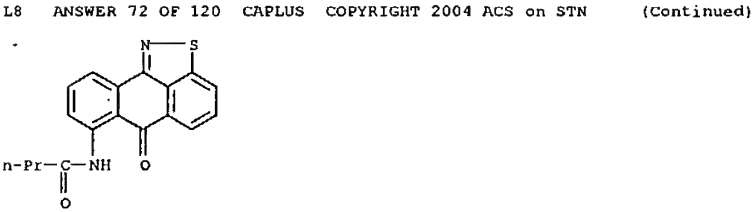


L8 ANSWER 72 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:13942 CAPLUS  
DOCUMENT NUMBER: 72:13942  
TITLE: Printing inks, and dyes for their manufacture  
INVENTOR(S): Zwahlen, Guenther  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: S. African, 26 pp.  
CODEN: SFXKAB  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6804331		19690108		
CH 489587			CH	
CH 510095			CH	
DE 1771813			DE	
FR 1573698			FR	
FR 1673698			FR	
GB 1221126			GB	
US 3854969		19740000	US	
US 3961965		19760000	US	

PRIORITY APPLN. INFO.: CH 19670724 19671102

GI For diagram(s), see printed CA Issue.  
AB Printing inks composed of dyes which migrate and (or) sublime at  
140-250°, soluble resins or mixts. of resins, aqueous organic or mixts.  
of organic solvents, binding resins, or mixts. of resins, and optionally ink  
improvers, such as silica gel, are prepared by standard methods of  
grinding,  
solution, and suspension. The dyes described have m.ps. >140° and  
mol. wts. <1000 and include compatible fluorescent whiteners as well as  
color bodies. The ratio of resins to dyes is 9:1 to 1:4. The cellulose  
ethers with 2-4 C atoms in the ether residue are preferred, but all  
resins  
and binders customarily used in lacquer and printing ink manufacture may  
be used. For example,  
7-butyramido-6-H-anthraquinone[9,1-cd]isothiazol-6-one  
(I) 20, H2O 360, and hydroxypropyl cellulose 20 parts were ground for 24  
hr in a cooled sand mill and spray dried. Then the dye 1, Et cellulose  
1,  
ground NaCl 4, and diacetone alc. 0.9 part were kneaded for 4 hr at  
50°; granulated with 1 part H2O, and wet ground by adding 75 parts  
H2O. The suspension was then filtered, washed, and dried in vacuum. The  
ink was prepared by mixing the dye 2.5, Et cellulose 2.5, and iso-PrOH 10  
parts and stirring until solution or homogenous suspension was achieved.  
IT 61931-40-6  
RL: USES (Uses)  
(printing ink from hydroxypropyl cellulose and)  
RN 61931-40-6 CAPLUS  
CN Butanamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX  
NAME)

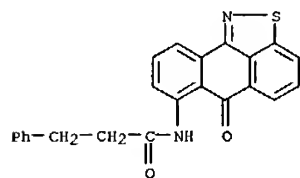


27/09/2004

10071390

L8 ANSWER 73 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1970:13921 CAPLUS  
DOCUMENT NUMBER: 72:13821  
TITLE: Yellow dispersed dyes  
INVENTOR(S): Fujioka, Seigo; Fujiwara, Susumu; Akamatsu, Takashi  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 3 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 44015317	B4	19690707	JP	19651115
GI	For diagram(s), see printed CA Issue.				
AB	The title compds. (I) dye linear aromatic polyester fibers (II) yellow shades fast to light, washing, and sublimation. Thus, a refluxing mixture of 75.6 5-aminoisothiazoloanthrone 75.6, PhNMe2 38, and PhMe 400 was treated dropwise with PhCH2CH2COCl 53 parts, and boiled for 2 hr to give 103 parts I (R = Ph, n = 2), m. 182-4.5°. Similarly were prepared the following I (R, n, and m.p. given): OPh, 2, 168.5-72.5°; SPh, 2, -, Ph, 3, -, OC6H4Cl-4, 3, -, oC6H4Me-4, 2, -, and C6H4Cl-X, 2, -. 23741-83-5P 25174-81-6P				
IT	RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)				
RN	23741-83-5 CAPLUS				
CN	Benzenepropanamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI)				
(CA	INDEX NAME)				

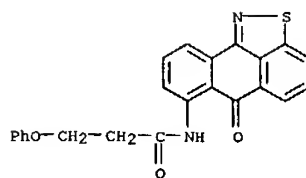


RN 25174-81-6 CAPLUS  
CN Propionamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-3-phenoxy- (8CI)  
(CA INDEX NAME)

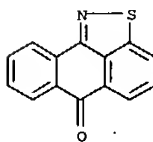
L8 ANSWER 74 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1969:47350 CAPLUS  
DOCUMENT NUMBER: 70:47350  
TITLE: Reactions of anthraisoisothiazolone  
AUTHOR(S): Kaji, Aritsune; Shah, Kalyanbhai H.; Shah, K. M.  
CORPORATE SOURCE: Bombay Univ., Bombay, India  
SOURCE: Indian Journal of Chemistry (1968), 6(11), 613-15  
CODEN: IJOCAP; ISSN: 0019-5103  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB A mixture of 60 g. 1-chloroanthraquinone, 60 g. fused Na2S, 12 g. S, 900 ml. 95% EtOH and 900 ml. liquor NH3 was heated 7 hrs. at 100-10° in an autoclave. The dried product (obtained after distillation of H2O) was refluxed 6 hrs. with 15 g. fused NaOAc, 10 g. iodine and 50 ml. PhNO2 to yield 4.5 g. anthraisoisothiazolone (I), m. 221° (CA 24: 4941, m. 221°) (obtained after steam distillation and crystallization from HOAc). A mixture of 20 g. KOH, 30 g. EtOH, 3 g. I and 3 g. glucose was refluxed with stirring 7 hrs. The product obtained was extracted with Me2CO to yield 0.5 g. I (as Me2CO-soluble fraction) and 2.3 g. anthraisoisothiazolone (II) (as Me2CO insol. fraction), which on crystallization from PhNH2 gave yellow needles. II dissolved in concentrated H2SO4 with reddish-yellow color and dyed cotton from yellowish brown alkaline dithionite vat. If the dye was prepared in the absence of glucose, a yellow product insol. in solvents and analyzing for C28H12N2O3S2 was obtained. The structure of the dye II (C28H12N2O2S2) was established by desulfurization and Clar-reduction studies of I and II. Thus, desulfurization of 2 g. I by refluxing 5 hrs. with 20 g. Raney Ni in 400 ml. EtOH yielded 1,2,3,4-tetrahydroanthraquinone, m. 155-6° (Skita, 1925), which on dehydrogenation with iodine and PhNO2 yielded anthraquinone, m.p. and mixed m.p. 286-7°. Similarly, desulfurization of 1 g. II with 10 g. Raney Ni and 75 ml. ethylene glycol (5-hr. refluxing at 140-50°) and subsequent dehydrogenation yielded 2,2'-bianthraquinonyl, m.p. and mixed m.p. 387°; 2H2SO4max. 418-20 and 290 mp. Clar reduction of 0.5 g. I by heating 1 hr. at 280-90° with 0.5 g. NaCl, 2 g. Zn dust and 3 g. fused ZnCl2 yielded 0.1 g. anthracene. Reduction of I with (iso-PrO)3Al yielded anthraisoisothiazole, m. 132° (EtOH). Similarly, Clar reduction of 0.5 g. II with 0.5 g. NaCl and 3 g. ZnCl2 4 hrs. at 400°/1 mm. yielded 2,2'-bianthracene, m. 355° (xylene) (Schole, 1919, m. 355°). I differed in behavior from benzanthrone and anthrapyrazolone, as it did not yield a 3-hydroxy derivative on treatment with alc. alkaline Na (0.8 g.) was added (1 hr.) to a heated and stirred mixture of 20 g. PhNH2, 0.03 g. Cu and 0.03 g. NiO in N atmospheric. The mixture was refluxed 15 min. and 3 g. I and 10 ml. PhNH2 added at 0-5°, stirred 2 hrs. at room temperature and poured on dilute HCl to yield 2.3 g. anilinoanthraisoisothiazolone (III), m. 304-5° (isolated from the Me2CO insol. fraction of the reaction product by chromatog. on Al2O3). Alternatively, a mixture of 2 g. I, 60 ml. Me2SO (DMSO), 10 ml. PhNH2 and 10 g. KOH was stirred 6 hrs. at room temperature

Page 14

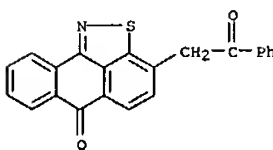
L8 ANSWER 73 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 74 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
to yield 2.8 g. III, m. 303-4° (PhCl). Desulfurization of III and subsequent dehydrogenation afforded 2-anilinoanthraquinone, m. 233° (CA 10: 2303, m. 234-6°), indicating that the anilino group has entered in 3-position of I. Other condensation products of I with amines or ketones in the presence of Me2SO and KOH are (3-anthraisoisothiazolone deriv., amine or ketone, % yield, and m.p. given): acetonyl, acetone, 70, 208°; acetophenonyl, acetophenone 70, 202°; benzoyl, benzyl cyanide 70, 252°; 2-anthranyl, anthrone 85, 258°; 4-benzanthronyl, benzanthrone 30, >320°; 1-aminoanthraquinolyl, 1-aminoanthraquinone 90, >320°; 1-amino-4-benz-amidoanthraquinolyl, 1-amino-4-benzamidoanthraquinone 95, >320°; 2-amidoanthraquinolyl, 2-aminoanthraquinone 90, >320°. Desulfurization of IV with Raney Ni yielded 2,2'-dianthraquinonylamine as coppery red needles (crystd. PhNO2). 6313-41-3P 21277-60-1P 21277-61-2P 21277-62-3P 21277-63-4P 21278-49-9P 21278-50-2P 26970-04-7P 26970-05-8P 26970-06-9P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
RN 6313-41-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)



RN 21277-60-1 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-(2-oxo-2-phenylethyl)- (9CI) (CA INDEX NAME)

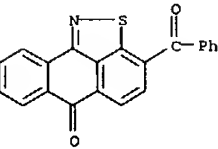


RN 21277-61-2 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-benzoyl- (8CI, 9CI) (CA INDEX NAME)

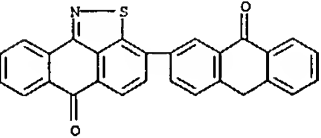
Kamal Saeed

27/09/2004

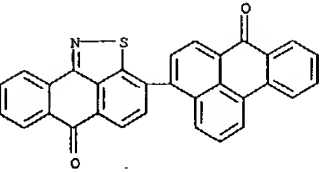
L8 ANSWER 74 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 21277-62-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-(9,10-dihydro-9-oxo-2-anthryl)- (8CI) (CA INDEX NAME)

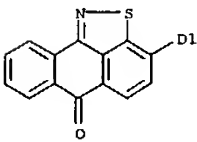
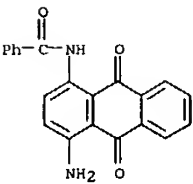


RN 21277-63-4 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-(7-oxo-7H-benz[de]anthracen-4-yl)- (8CI) (CA INDEX NAME)

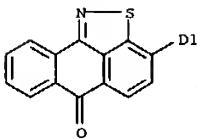
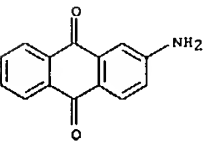


RN 21278-49-9 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-(phenylamino)- (9CI) (CA INDEX NAME)

L8 ANSWER 74 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

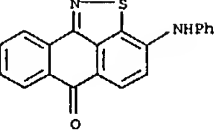


RN 26970-06-9 CAPLUS  
CN Anthraquinone, amino(6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl)- (8CI) (CA INDEX NAME)

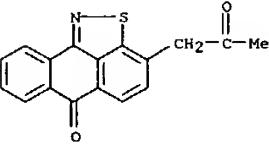


10071390

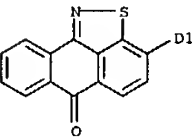
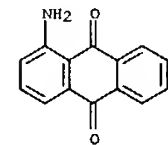
L8 ANSWER 74 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 21278-50-2 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3-(2-oxopropyl)- (9CI) (CA INDEX NAME)



RN 26970-04-7 CAPLUS  
CN Anthraquinone, 1-amino(6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl)- (8CI) (CA INDEX NAME)



RN 26970-05-8 CAPLUS  
CN Benzamide, N-[4-amino(6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl)-1-anthraquinonyl]- (8CI) (CA INDEX NAME)

L8 ANSWER 75 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:12606 CAPLUS  
DOCUMENT NUMBER: 70:12606  
TITLE: Bulk dyeing of linear polymers  
INVENTOR(S): Bowman, Francis; Cooper, Albert C.; Irving, Francis; Livingston, Alistair; White, David F.; Wilkinson, Donald G.  
PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
SOURCE: Brit., 5 pp.  
CODEN: BRXXAA  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1126074		19680905	GB	19660217
DE 1694445			DE	
FR 1516298			FR	
US 3489713		19700000	US	

AB Bulk dyeing of poly(ethylene terephthalate) (I) or other polyesters is effected with dyes of the general formula Q(XY)<sub>m</sub>, where Q contains at least 4 fused rings and represents benzanthrone, 1',9'-anthrapyridone, 1',9'-anthrapyrimidine, isothiazoloanthrone, pyrazoloanthrone, 3',4'-phthaloylacridone, dibenzanthrone, isodibenzanthrone, triphenodioxazine, or naphthalene-1,4,5,8-tetracarboxylic acid diimides (preferred) and Y represents a hydroxylalkyl group linked directly or through X to C or N in Q, X being O, S, CONH, CONR, or CO<sub>2</sub>, and m = 1-3

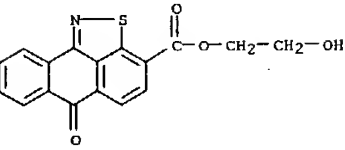
(R = lower alkyl or hydroxyalkyl). The dye in finely divided form or dispersed in a volatile solvent is mixed with granules or chips of I and the mixture is melt spun after removal of solvent. Thus, 1 part finely divided bis(β-hydroxyethylimide) of 2,6-dianilinoanthracene-1,4,5,8-tetracarboxylic acid (II) is mixed with 100 parts of small granules of I and melt spun to give fast, brilliant blue fibers. The polyester from ethylene glycol and α,β-bis(p-carboxyphenyl)ethane is dyed with II in the same way. Other dyes used for I (and shade produced) are: 3-(β-hydroxyethoxy)benzanthrone, greenish yellow; 10-(β-hydroxyethoxy)-3',4'-phthaloylacridone, reddish violet; bis-(hydroxyethyl)triphenodioxazine, deep violet; 6-phenylamino-3-(β-hydroxyethyl)-1',9'-anthrapyridone, crimson; 16-2,3-dihydroxypropoxy-17-hydroxydibenzanthrone, reddish blue; 3-(β-hydroxyethylthio)benzanthrone, greenish yellow; β-hydroxy-ethylisothiazoloanthrone-3-carboxylate, and isothiazoloanthrone-3-carboxamides, all yellow.

IT 22519-80-8 22519-81-9  
RL: USES (Uses)  
(for polyesters)  
RN 22519-80-8 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxylic acid, 6-oxo-, 2-hydroxyethyl ester (8CI, 9CI) (CA INDEX NAME)

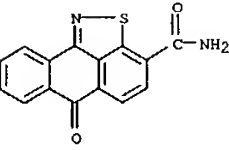
27/09/2004

10071390

L8 ANSWER 75 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 22519-81-9 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, 6-oxo- (8CI, 9CI) (CA INDEX NAME)



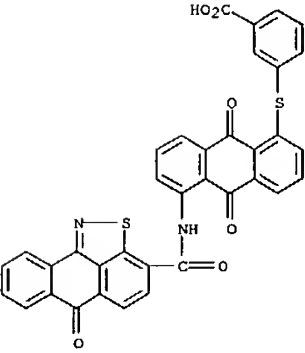
L8 ANSWER 76 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1967:509629 CAPLUS  
DOCUMENT NUMBER: 67:109629  
TITLE: Anthraquinone dyes  
INVENTOR(S): Altermatt, Hans  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3337553		19670822		
PRIORITY APPLN. INFO.:			SE	19601028

GI For diagram(s), see printed CA Issue.  
AB Comps. of the general formulas I, II, and III give yellow dyeings on cotton. Thus, a mixture of 10.1 parts anthraquinone-2-carboxylic acid, 3.2 parts SOCl<sub>2</sub>, 150 parts PhNO<sub>2</sub>, and a small amount of pyridine is agitated for 0.5 hr. at 120°, heated at 90° with 13.2 parts 1-amino-5-(phenylthio)anthraquinone (IV), agitated for 3 hrs. at 140-5°, cooled, and filtered. The product (5 parts) is treated at room temperature with 35 parts 5% oleum and added to 200 parts ice to give I (R = x-NaO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>S, R<sub>1</sub>-R<sub>3</sub> = H), greenish yellow on cotton. Similarly prepared are the following I (R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and shade on cotton given): H, H, 2,5,x-Me<sub>2</sub>(NaO<sub>3</sub>S)C<sub>6</sub>H<sub>2</sub>S, H, yellow; PhO, H, H, SO<sub>3</sub>Na, yellow; PhS, H, H, SO<sub>3</sub>Na, -; x-NaO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>S, NH<sub>2</sub>, H, H, brick red. Also prepared are yellow II (X and Y given): NH, x-NaO<sub>3</sub>S; S, m-HO<sub>2</sub>C. Also prepared are yellow III (R and X given): H, H; H, Cl; H, PhO; H, m-NaO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>CONH; CO<sub>2</sub>H, H. Similarly, other dyes are prepared (reactants and shade on cotton given): IV, 1,9-isothiazoleanthrone-2-carboxylic acid, oleum, -; IV, 1,9-isothiazoleanthrone-4-carboxylic acid, oleum, -; IV, 1,9-anthrapyrimidine-2-carboxylic acid, oleum, yellow to orange. Also prepared are 1-chloro-5-(4-carboxyphenylthio)anthraquinone (V), V acid chloride, and III (R = H, X = NH<sub>2</sub>).  
IT 1773-58-6P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)  
RN 1773-58-6 CAPLUS  
CN Benzoic acid, 3-[[[9,10-dihydro-9,10-dioxo-5-[[[6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl]carbonyl]amino]-1-anthracenyl]thio]- (9CI) (CA INDEX NAME)

L8 ANSWER 76 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

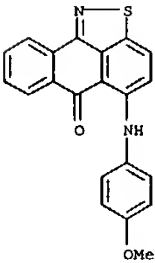


L8 ANSWER 77 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1967:509622 CAPLUS  
DOCUMENT NUMBER: 67:109622  
TITLE: Isothiazolanthrone dyes  
INVENTOR(S): Guenthard, Jacques; Mislin, Roland  
PATENT ASSIGNEE(S): Sandoz Ltd.  
SOURCE: Patentschrift (Switz.), 5 pp.  
CODEN: SWXXAS  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 428043		19670714	CH	19650816
DE 1644650			DE	
FR 1489493			FR	
GB 1149006			GB	
US 3522263		19700000	US	

GI For diagram(s), see printed CA Issue.  
AB Comps. of the general formula I give red and orange dyeings on polyester fibers (II). Thus, a mixture of 4-amino-1,9-isothiazolanthrone 24, p-MeOC<sub>6</sub>H<sub>4</sub>Br 3, anhydrous Na<sub>2</sub>CO<sub>3</sub> 13, and CuSO<sub>4</sub>.5H<sub>2</sub>O 1 part is heated for 16 hrs. at 160°, cooled in 1 hr., and filtered to give I (R = H, Ar = p-MeOC<sub>6</sub>H<sub>4</sub>), an orange powder, reddish orange in PhCl, reddish orange on II. Similarly, prepared are the following I (R, Ar, appearance, and shade on II given): H, 2-ClO<sub>2</sub>H<sub>7</sub>, red-brown powder, scarlet-red; Me, Ph, orange powder, orange; H, p-EtNHC<sub>6</sub>H<sub>4</sub>, brownish powder, red; H, p-MeNHC<sub>6</sub>H<sub>4</sub>, brown powder, -; Br, Ph, -, orange; H, Ph, -, orange-yellow; H, p-tolyl, red powder, -(orange in PhCl); H, p-BrC<sub>6</sub>H<sub>4</sub>, -, orange.  
IT 16388-78-6P 16388-79-7P 16388-80-0P  
16388-81-1P 16388-82-2P 16388-83-3P  
16388-84-4P 16388-85-5P 16426-75-8P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)  
RN 16388-78-6 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-[(4-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)



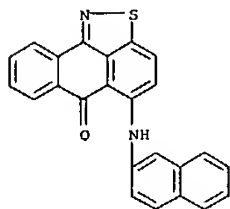
RN 16388-79-7 CAPLUS

Kamal Saeed

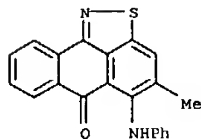


27/09/2004

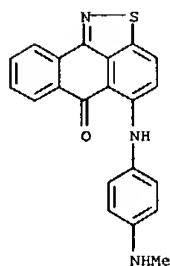
L8 ANSWER 77 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-(2-naphthalenylamino)- (9CI) (CA INDEX NAME)



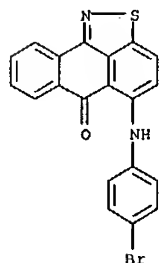
RN 16388-80-0 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 4-methyl-5-(phenylamino)- (9CI) (CA INDEX NAME)



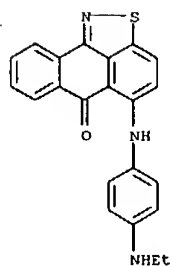
RN 16388-81-1 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-[[4-(methylamino)phenyl]amino]- (9CI) (CA INDEX NAME)



RN 16388-82-2 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 4-bromo-5-(phenylamino)- (9CI) (CA INDEX NAME)

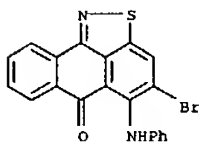


RN 16426-75-8 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-[[4-(ethylamino)phenyl]amino]- (9CI) (CA INDEX NAME)



10071390

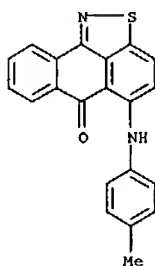
L8 ANSWER 77 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
INDEX NAME)



RN 16388-83-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-(phenylamino)- (9CI) (CA INDEX NAME)



RN 16388-84-4 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



RN 16388-85-5 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-[(4-bromophenyl)amino]- (9CI) (CA INDEX NAME)

L8 ANSWER 78 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1967:501018 CAPLUS  
DOCUMENT NUMBER: 67:101018  
TITLE: Polycyclic dyes  
PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
SOURCE: Fr., 4 pp.  
CODEN: FRXXAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

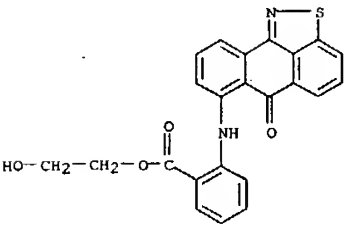
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1474517		19670324	FR	19660404

GI For diagram(s), see printed CA Issue.  
AB Comps. useful for the mass dyeing of synthetic linear polyesters and having the general formula I, in which Q is a polycyclic dye radical, X = NH or S, R = (CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>-2H and n = 1 or 2, were prepared by esterification of I (R = H). Thus, a mixture of 6-(o-carboxyanilino)-3-methyl-1':9'-anthrapyridone (II) 10, SOCl<sub>2</sub> 5, PhMe 75, and pyridine 0.2 part was refluxed for 2 hrs., cooled to 20°, and the acid chloride (III) filtered and washed with PhMe. III was heated with 50 parts diethylene glycol for 20 hrs. at 150°, cooled, and poured into H<sub>2</sub>O to give the corresponding I (IV) which dyed poly(ethylene terephthalate) (V) in carmine shades. IV was also prepared by heating a mixture of the Na salt of II 200, ClCH<sub>2</sub>CH<sub>2</sub>OH 300, and Et<sub>2</sub>NH 5 parts for 20 hrs. at 130-40°. Other I were similarly prepared (starting compound and shade on V given): 6-(o-carboxyphenylthio)-3':4'-phthaloylacridone, blue; 7-(o-carboxyanilino)-3':4'-phthaloylacridone, purple (4-isomer scarlet); 5-(o-carboxyanilino)-1':9'(N)-isothiazolanthrone, orange to yellow; 6:8-bis(o-carboxyanilino)-3-methyl-1':9'-anthrapyridone (VI), violet. VI was prepared by treating 6-bromo-8-chloro-3-methyl-1':9'-anthrapyridone (obtained by bromination of 8-chloro-3-methyl-1':9'-anthrapyridone) with 2-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>K and a Cu catalyst in glycol at 160-80°. A mixture of 6-amino-3':4'-phthaloylacridone 80, 2-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH 70, Na<sub>2</sub>CO<sub>3</sub> 10, Cu<sub>2</sub>Cl<sub>2</sub> 6, and PhNO<sub>2</sub> 1000 parts was stirred for 4 hrs. at 205-10°, PhNO<sub>2</sub> steam distilled, and the residue was filtered, washed and dried to give a green dye. 6-Bromo-3':4'-phthaloylacridone and 4-HSC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH gave a blue dye.  
IT 17311-86-3P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)  
RN 17311-86-3 CAPLUS  
CN Anthranilic acid, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-, 2-hydroxyethyl ester (8CI) (CA INDEX NAME)

27/09/2004

10071390

L8 ANSWER 78 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



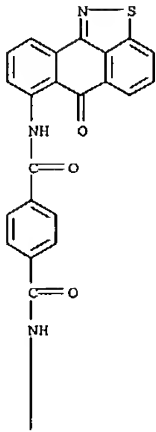
L8 ANSWER 79 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1967:491680 CAPLUS  
DOCUMENT NUMBER: 67:91680  
TITLE: Pigments  
INVENTOR(S): Pfister, Xaver  
PATENT ASSIGNEE(S): Sandoz Ltd.  
SOURCE: Fr., 10 pp. Addn. to Fr. 1407958  
CODEN: FRXXAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 88611		19670303		
CH 452754			CH	
DE 1644646			DE	
GB 1105499			GB	
US 3598831		19710000	US	
PRIORITY APPLN. INFO.:				
			CH	19640703
			CH	19640717

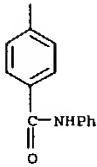
GI For diagram(s), see printed CA Issue.  
AB Addition to Fr. 1,407,958 (see Belg. 653,018, CA 64: 16030b). Compds. of the general formula I, where X is an anthraquinone or perinone radical, and R is CONH or NHCO, are pigments for coloring synthetic plastics and natural materials. Thus, 10 parts finely divided 1-aminoanthraquinone (II) was added slowly with stirring to 30 parts p-C6H4(COCl)2 (III) in 150 parts PhNO2 at 70-80°, holding the temperature at 70-80° until the II disappeared; the mixture was cooled and stirred at 30° for 2 hrs., the precipitate filtered, unreacted II removed with PhNO2, the product suspended in 150 parts PhNO2, 14 parts 4-H2NC6H4CONHPh (IV) and 5 parts pyridine added, the mixture stirred for 3 hrs. at 130°, the precipitate filtered, hot, washed with PhNO2, with EtOH, and finally with H2O, and dried at 100°. The dye (10 parts) was boiled for 1 hr. in 200 parts HCONMe2, cooled to 20°, filtered, washed with HCONMe2, and H2O, and dried to give I (X = 1-anthraquinoyl, R = CONH, Y = H) which dyed poly(vinyl chloride) yellow. Similarly, other I were prepared (XNH2, R, Y, and shade given): V, CONH, H, yellow; IV, 1-amino-4-hydroxyanthraquinone, CONH, H, red; II, NHCO, H, yellow; VI, NHCO, H, yellow; 1-amino-4-methoxyanthraquinone, CONH, H, reddish yellow; 1-amino-4-(4-chlorophenylthio)anthraquinone, CONH, NHBz, red.  
IT 16371-30-5P 16371-32-7P  
RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)  
RN 16371-30-5 CAPLUS  
CN 1,4-Benzenedicarboxamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-N'-(4-[(phenylamino)carbonyl]phenyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 79 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



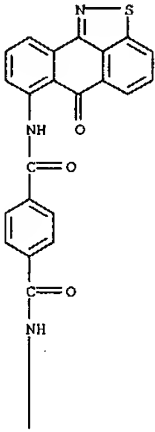
PAGE 2-A



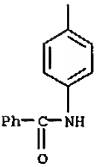
RN 16371-32-7 CAPLUS  
CN Terephthalamide, N-(p-benzamidophenyl)-N'-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (8CI) (CA INDEX NAME)

L8 ANSWER 79 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



27/09/2004

10071390

L8 ANSWER 80 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:491679 CAPLUS  
 DOCUMENT NUMBER: 67:91679  
 TITLE: Polycyclic dyes for the mass-coloration of poly(ethylene terephthalate)  
 INVENTOR(S): Bowman, Francis; Cooper, Albert Charles; Irving, Francis; Livingston, Alistair  
 PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
 SOURCE: Brit., 5 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

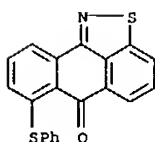
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1073367		19670628	GB	19660308
DE 1644562			DE	

AB The title compds. of general formula X(YC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OR)<sub>n</sub> (I), where X is a 3,4-phthaloylacridone, 3-methyl-1,9-anthrapyridone, or 1,9(N)-isothiazoloanthrone residue, Y = NH or S, R = H or CH<sub>2</sub>CH<sub>2</sub>OH, n = 1 or 2, and the ester group is ortho or para to Y, are prepared by 4 routes:  
 (1) XNH<sub>2</sub> is reacted with 2-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>R; (2) XBr is condensed with 4-HSC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>R; (3) I (X = Na) is esterified with ClCH<sub>2</sub>CH<sub>2</sub>OH; or (4) I (X = H) is reacted with SOCl<sub>2</sub> and the acid chloride esterified HOCH<sub>2</sub>CH<sub>2</sub>OH or (HOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O (II). The products color synthetic linear polyesters in fast orange to green shades without impairing the properties of the the fibers.  
 For example, a mixture of 6-amino-3,4-phthaloylacridone 80, 2-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH 70, Na<sub>2</sub>CO<sub>3</sub> 10, CuCl 6, and PhNO<sub>2</sub> 1000 parts was stirred at 205-10° for 4 hrs. The PhNO<sub>2</sub> was steam distilled and the residue filtered, washed with H<sub>2</sub>O, and dried to give a green dye for poly(ethylene terephthalate). A mixture of 6-(o-carboxyanilino)-3-methyl-1,9-anthrapyridone (III) Na salt 200, ClCH<sub>2</sub>CH<sub>2</sub>OH 300, and Et<sub>2</sub>NH 5 parts was stirred at 130-40° for 20 hrs. and treated with 600 parts H<sub>2</sub>O to yield a carmine dye. By this method the Na salts of the following polycyclic compds. were converted into dyes (shade given): 6-(o-carboxyphenylthio)-3,4-phthaloylacridone, blue; 4-(o-carboxyanilino)-3,4-phthaloylacridone, purple; 7-(o-carboxyanilino)-3,4-phthaloylacridone, crimson; 5-(o-carboxyanilino)-1,9(N)-isothiazoloanthrone, orange-yellow; and 6,8-bis(o-carboxyanilino)-3-methyl-1,9-anthrapyridone, violet. A mixture of 6-bromo-3,4-phthaloylacridone 810, 4-(HSC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH was anhydrous K<sub>2</sub>CO<sub>3</sub> 420, and HOCH<sub>2</sub>CH<sub>2</sub>OH 4000 parts was stirred at 145° for 20 hrs., poured into 10,000 parts H<sub>2</sub>O, and aqueous HCl added to give a bright blue dye. A mixture of III 10, SOCl<sub>2</sub> 5, PhMe 75, and pyridine 0.2 part was stirred for 2 hrs. at the boil under reflux, cooled to 20°, and the precipitated acid chloride filtered, washed with PhMe, and stirred with 50 parts

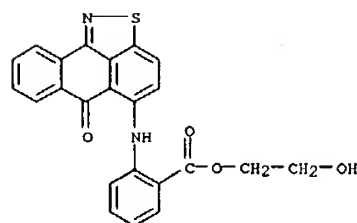
L8 ANSWER 81 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:482954 CAPLUS  
 DOCUMENT NUMBER: 67:82954  
 TITLE: Water-insoluble 5-(phenylmercapto)-1,9-isothiazoloanthrone dye  
 INVENTOR(S): Altermatt, Hans  
 PATENT ASSIGNEE(S): CIBA Ltd.  
 SOURCE: Ger., 2 pp.  
 CODEN: GWXXAW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1240202		19670511	DE	19611027

GI For diagram(s), see printed CA Issue.  
 AB 1-Amino-5-(phenylmercapto)anthraquinone (33.1 parts) was added with stirring to a solution of 7.3 parts NaNO<sub>2</sub> in 110 parts concentrated H<sub>2</sub>SO<sub>4</sub>, poured onto ice after 3 hrs., 5000 parts H<sub>2</sub>O added, clarified, treated with a solution of 33 parts KSCN in 125 parts H<sub>2</sub>O, boiled, the precipitate filtered hot, and washed to give 1-thiocyanato-5-(phenylmercapto)anthraquinone (I), an orange-yellow powder. A mixture of 10 parts I and 100 parts concentrated NH<sub>4</sub>OH was shaken at 140-5° for 3 hrs., the precipitate filtered, washed, and dried in vacuo at 70° to give II, a light- and sublimation-fast yellow dye for polyester fibers.  
 IT 16195-55-4P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 RN 16195-55-4 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-(phenylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L8 ANSWER 80 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 II for 20 hrs. at 150°. The mixt. was cooled, and poured into H<sub>2</sub>O to give a carmine shade.  
 IT 16295-08-2P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 RN 16295-08-2 CAPLUS  
 CN Benzoic acid, 2-[(6-oxo-6H-anthra[9,1-cd]isothiazol-5-yl)amino]-, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)

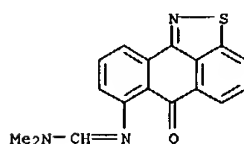


L8 ANSWER 82 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:465414 CAPLUS  
 DOCUMENT NUMBER: 67:65414  
 TITLE: Fused anthraquinones containing an azomethine group  
 INVENTOR(S): Schwarz, Max; Breidbach, Guenter  
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
 SOURCE: Belg., 14 pp.  
 CODEN: BEXXAL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 657303		19650415		
FR 1427132			FR	

PRIORITY APPLN. INFO.: DE 19631219

GI For diagram(s), see printed CA Issue.  
 AB Comps. of the general formula I and compds. II, III, and IV are prepared and used to dye poly(ethylene terephthalate) (V) fibers. Thus, a mixture of 1.61 g. HCNOMe<sub>2</sub> and 2.6 g. SOCl<sub>2</sub> is added to a mixture (50°) of 4.94 g. I (X = H, Y = NH<sub>2</sub>) and 25 ml. PhNO<sub>2</sub>, the mixture is heated to 80°, agitated for 1 hr. at 80°, cooled to room temperature, and treated with 200 ml. Me<sub>2</sub>CO to give I (X = H, Y = NHCH:NMe<sub>2</sub>+Cl-), yellow brown product, scarlet red on V. Similarly prepared are (appearance and shade on V given): II, dark violet, clear blue; III, yellow, red-violet; I (X = NHCH:NMe<sub>2</sub>+Cl-, Y = H), golden yellow, greenish yellow; IV, yellow, orange.  
 IT 16539-58-5P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 RN 16539-58-5 CAPLUS  
 CN Methanimidamide, N,N-dimethyl-N'-(6-oxo-6H-anthra[9,1-cd]isothiazol-5-yl)-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

27/09/2004

10071390

L8 ANSWER 83 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1967:11852 CAPLUS  
DOCUMENT NUMBER: 66:11852  
TITLE: Basic dyes  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: Neth. Appl., 24 pp.  
CODEN: NAXXAN  
DOCUMENT TYPE: Patent  
LANGUAGE: Dutch  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6600581		19660719		
CH 457656			CH	
DE 1544458			DE	
FR 1464401			FR	
GB 1090691			GB	
GB 1123484			GB	
US 3687929		19720000	US	
PRIORITY APPLN. INFO.:			CH	19650118

GI For diagram(s), see printed CA Issue.

AB Azo and anthraquinone dyes containing nicotinoylamino and iso-nicotinoylamino

groups quaternized with Me<sub>2</sub>SO<sub>4</sub> or MeCl were prepared for the dyeing of polyacrylonitrile fibers. 2,6,4-Cl<sub>2</sub>-(O<sub>2</sub>N)C<sub>6</sub>H<sub>2</sub>N:NC<sub>6</sub>H<sub>3</sub>(Cl)N(CH<sub>2</sub>CH<sub>2</sub>OH)2-2,4 (21.67 parts) in 75 parts C<sub>5</sub>H<sub>5</sub>N treated at 0-5° with 26.7 parts nicotinoyl chloride HCl salt (I.HCl), stirred for 3 hrs. at about 80°, poured into iced H<sub>2</sub>O, and neutralized with aqueous NaOH, and the precipitate stirred 5 hrs. at 80° in 100 parts PhCl with 19 parts Me<sub>2</sub>SO<sub>4</sub> in 100 parts PhCl and repptd. from H<sub>2</sub>O with NaCl and ZnCl<sub>2</sub> gave II which dyes brown shades of very good fastness properties. Similarly, other compds. were acylated and quaternized (starting dye, acylating agent, and shade given): 2,4-NC(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> → PhN(CH<sub>2</sub>CH<sub>2</sub>CN)CH<sub>2</sub>CH<sub>2</sub>OH, I.HCl, red-brown; 4,3-(NC)2-C:CH(Me)C<sub>6</sub>H<sub>3</sub>N(CH<sub>2</sub>CH<sub>2</sub>OH)2, isonicotinoyl chloride HCl salt, greenish yellow; 2-bromo-1,4-diaminoanthraquinone, I.-HCl (1 mole), red-violet; 4-MeOC<sub>6</sub>H<sub>4</sub>N:NC<sub>6</sub>H<sub>3</sub>(OH)NH<sub>2</sub>-2,5,I, yellow; 2,4-O<sub>2</sub>N(Me)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> → 1-(3-aminophenyl)-3-methyl-5-pyrazolone, I, yellow. 4,2-PhNH(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>SO<sub>2</sub>NHC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>-4 and 3-hydroxy-4'-aminoquinophthalone acylated with I.MeCl gave yellow dyes. 5-Nicotinoylamino-1,5-isothiazolanthrone quaternized with Me<sub>2</sub>SO<sub>4</sub> gave a yellow dye. Similarly, other nicotinamides were quaternized [starting compound (Q = nicotinoylamino) and shade given]: 4-OC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> → 4-MeC<sub>6</sub>H<sub>4</sub>OH, yellow; 2,4-Cl(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> → 1,7-QC<sub>10</sub>H<sub>6</sub>OH, scarlet-red; 2,4,6-Cl(O<sub>2</sub>N)2C<sub>6</sub>H<sub>2</sub>NH<sub>2</sub> → 4,2-Q(Et<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>OMe, reddish blue. 4-(N-Methylnicotinoylamino)aniline chloride diazotized and coupled with 4-ClC<sub>6</sub>H<sub>4</sub>OH gave a yellow dye. PhN(CH<sub>2</sub>CH<sub>2</sub>CN)CH<sub>2</sub>CH<sub>2</sub>OH acylated with I.HCl, quaternized with Me<sub>2</sub>SO<sub>4</sub> and coupled with diazotized

5-amino-3-phenyl-1,2,4-thiadiazole gave a red dye. I.MeCl, a waxy white solid, was prepared by quaternizing nicotinic acid with Me<sub>2</sub>SO<sub>4</sub> and treating the salt with SOCl<sub>2</sub>.

IT 13620-42-3P

RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)

L8 ANSWER 84 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1966:474010 CAPLUS  
DOCUMENT NUMBER: 65:74010  
ORIGINAL REFERENCE NO.: 65:13855f  
TITLE: Infrared heating in the textile industry  
AUTHOR(S): Seurin, I. G.  
SOURCE: Tinctoria (1966), 63(7), 274-81  
CODEN: TINCAW; ISSN: 0040-7984  
DOCUMENT TYPE: Journal  
LANGUAGE: Italian

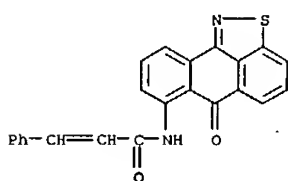
AB Ir heating of cellulose and synthetic materials is discussed.

IT 10110-27-7, Cinnamamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-

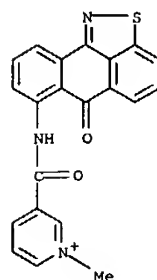
(preparation of)

RN 10110-27-7 CAPLUS

CN 2-Propenamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-3-phenyl- (9CI) (CA INDEX NAME)



L8 ANSWER 83 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 13620-42-3 CAPLUS  
CN Pyridinium,  
1-methyl-3-[(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)carbamoyl]-  
, methyl sulfate (8CI) (CA INDEX NAME)  
CM 1  
CRN 47532-17-2  
CMF C21 H14 N3 O2 S



CM 2

CRN 21228-90-0  
CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

L8 ANSWER 85 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1966:474008 CAPLUS  
DOCUMENT NUMBER: 65:74008  
ORIGINAL REFERENCE NO.: 65:13855f,13856a-b  
TITLE: 5-(Cinnamoylamino)-1,9-isothiazoleanthrone dye  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: 11 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 669181		19660303	BE	
PRIORITY APPLN. INFO.:			CH	19640907

GI For diagram(s), see printed CA Issue.

AB 5-Amino-1,9-isothiazoleanthrone (25.2 parts) is heated for 5 hrs. at 130-5° with 25 parts PhCH: CHCOCl in 100 parts PhNO<sub>2</sub>, cooled, filtered, and washed with PhNO<sub>2</sub> and EtOH to give I (n = 1) (II) which

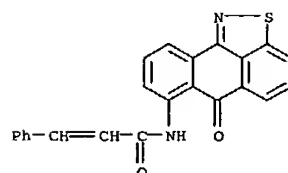
dyes polyester fibers deep yellow shades having good fastness to light and sublimation. II is stronger than I (n = 0) (III) (Fr. 1,277,906), and a 1:1 mixture of II and III gives shades twice as strong as when III is used alone.

IT 10110-27-7, Cinnamamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-

(preparation of)

RN 10110-27-7 CAPLUS

CN 2-Propenamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-3-phenyl- (9CI) (CA INDEX NAME)



27/09/2004

10071390

L8 ANSWER 86 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1966:474007 CAPLUS  
DOCUMENT NUMBER: 65:74007  
ORIGINAL REFERENCE NO.: 65:13855c-f  
TITLE: Styrylnaphthoxazoles  
INVENTOR(S): Buell, Bennett G.  
PATENT ASSIGNEE(S): American Cyanamid Co.  
SOURCE: 24 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

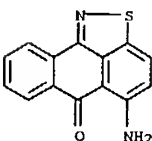
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 656224		19650525	BE	
PRIORITY APPLN. INFO.:			US	19631021

GI For diagram(s), see printed CA Issue.  
AB The styrylnaphthoxazole I (R = R1 = R2 = H) (II), substitution products of II, and the isomer III were prepared for use as optical brightening agents.  
2,1-HOC10H6NH2.HCl (58.8 g.) in 200 cc. C5H5N treated gradually with 57 g. fused PhCH:CHCOCl (IV), refluxed for 2 hrs., and stirred into 2 l. ice and H2O yielded 2,1-HOC10H6NHCOCH:CHPh (V). V added gradually to 3 g. p-MeC6H4SO3H in 200 cc. o-C6H4Cl2 at 170°, heated 4 hrs. at 170-5° with the removal of H2O, cooled to 100°, treated with 7 g. NaHCO3 and 2.5 g. surface-active agent in 100 cc. H2O, steam-distilled to remove o-C6H4Cl2, and adjusted to pH 9.0 gave II, m. 127°, (aqueous MeOCH2CH2OH) (chromatographed on Al2O3). Similarly were prepared I (R = p-Cl, R1 = Cl, R3 = H) and I (R = o-Et, R1 = H, R2 = Me). 1,2-BrC10H6NH2 (2.22 g.) and 1.67 g. IV in 25 cc. C5H5N heated 0.5 hr. on a steam bath gave 1.22 g. 1,2-BrC10H6NHCOCH:CHPh (VI), m. 183-4° (EtOH). VI (1.5 g.), 0.40 g. NaHCO3, and about 0.2 g. Cu powder heated for 10 min. at 240° yielded III, m. 123.5-4.5°. Examples for the optical brightening of poly(vinyl chloride), polyethylene, and cellulose acetate by I or III are given.  
IT 10110-27-7, Cinnamamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (preparation of)  
RN 10110-27-7 CAPLUS  
CN 2-Propenamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)-3-phenyl- (9CI) (CA INDEX NAME)

L8 ANSWER 87 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1966:439046 CAPLUS  
DOCUMENT NUMBER: 65:39046  
ORIGINAL REFERENCE NO.: 65:7323h,7324a-b  
TITLE: 1-Amino-2,4-dichloroanthraquinones  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: 11 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

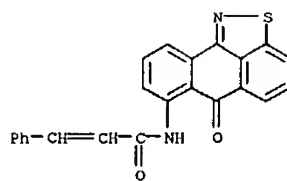
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6512570		19660330	NL	
PRIORITY APPLN. INFO.:			CH	19640929

AB The title compds. are obtained by chlorinating α-mono- or diaminoanthraquinones at <20° in the presence of a carboxamide derived from a secondary amine. Thus, a mixture of 948 parts HCONMe2 and 223 parts 1-aminoanthraquinone was cooled to 0-5°, 149 parts Cl passed at 0-5° in 4 hrs., the mixture heated to 60-5° in 1 hr., kept 1 hr. at 60-5°, cooled, filtered, and washed with 120 parts HCONMe2 and 2500 parts H2O, to give 262 parts (90% yield) 1-amino-2,4-dichloroanthraquinone, Cl content 24.60%, purity 95-7°, m. 197-201°. Recrystn. three times from PhCl gave m.p. 205-6°. Similarly were prepared the following anthraquinones (m.p. given): 1-amino-2,3,4-trichloro-, 256-7°; 1-amino-2-methyl-4-chloro-, 255-6°; appr. 1:1 mixture pentachloro- and hexachloro-1,5-diamino-, >360°; a 1:1 mixture of penta- and hexachloro-1,8-diamino-, --; tetrachloro-1,8-diamino-, m. 283-91°; 1,5-diamino-2,4-dichloro-, 236-8° (89% yield); dichlorinated 1-methylamino-, --(76% yield). 5-Aminodichloro-1,9-isothiazolanthrone and a dichlorinated 4-amino-1,9-anthrapyrimidine, m. 284-7° (96% yield), were also prepared.  
IT 30443-58-4, 6H-Anthra[9,1-cd]isothiazol-6-one, 5-aminodichloro- (preparation of)  
RN 30443-58-4 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-aminodichloro- (7CI, 8CI) (CA INDEX NAME)



2 (D1-C1)

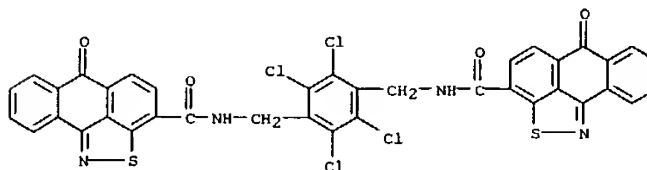
L8 ANSWER 86 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 88 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1966:404423 CAPLUS  
DOCUMENT NUMBER: 65:4423  
ORIGINAL REFERENCE NO.: 65:837d-f  
TITLE: Anthraisoisothiazole pigments  
INVENTOR(S): Demler, W. R.  
PATENT ASSIGNEE(S): Allied Chemical Corp.  
SOURCE: 3 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3245995		19660412	US	
PRIORITY APPLN. INFO.:				19640309

GI For diagram(s), see printed CA Issue.  
AB The title compds. have the general formula I, and are yellow pigments possessing excellent fastness to light. I are prepared by acylating a diamine with two moles 6-oxo-6H-anthra[9,1-cd]isothiazole-3-carbonyl chloride (II), optionally in the presence of an acid-binder. Thus, a mixture of II 30, MeCH(NH2)CH2NH2 3.5l, and PhNO2 300 parts is heated at 165-70° for 20 hrs. and at 200° for 0.5 hr., cooled to 90°, filtered, and the cake washed with PhNO2 and EtOH to give greenish yellow I (R = CH2CH(Me)). Similarly treated with II are the following amines: 2,5-bis(p-aminophenyl)-1,3,4-oxadiazole; m-C6H4(CH2NH2)2; H2N(CH2)3NH2; H2N(CH2)2NH2; 2,3,5,6,1,4-Cl4C6(CH2NH2)2; (4-H2NCGH4)2CH2; methylenebis-(4-aminocyclohexane); 2,6-diaminopyridine. A typical pigment conditioning procedure is given.  
IT 6376-67-6, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-[(tetrachloro-p-phenylene)dimethylene]bis[6-oxo- 6376-68-7, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(methylenedi-p-phenylene)bis[6-oxo- 6376-69-8, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-2,6-pyridinediylbis[6-oxo- 6396-95-8, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-propylenebis[6-oxo- 6396-96-9, 6H-Anthra[9,1-cd]isothiazole-3-carboxanilide, 4',4''-(1,3,4-oxadiazole-2,5-diyl)bis[6-oxo- 6396-97-0, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-trimethylenebis[6-oxo- 6396-98-1, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-ethylenebis[6-oxo- 6396-99-2, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(methylenedi-4,1-cyclohexylene)bis[6-oxo- 6551-50-4, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(m-phenylenedimethylene)bis[6-oxo- (preparation of)  
RN 6376-67-6 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-[(2,3,5,6-tetrachloro-4,1-phenylene)bis(methylene)]bis[6-oxo- (9CI) (CA INDEX NAME)



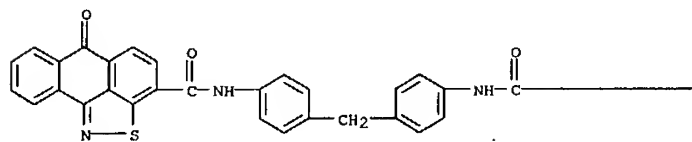
Kamal Saeed

27/09/2004

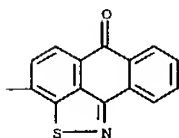
L8 ANSWER 88 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

RN 6376-68-7 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(methylenedi-4,1-phenylene)bis[6-oxo- (9CI) (CA INDEX NAME)

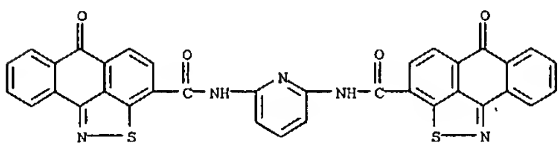
PAGE 1-A



PAGE 1-B

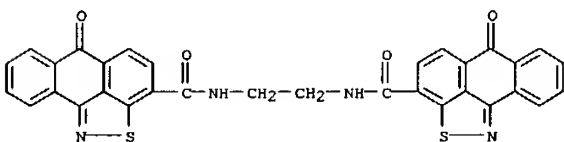


RN 6376-69-8 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-2,6-pyridinediylbis[6-oxo- (7CI, 8CI, 9CI) (CA INDEX NAME)



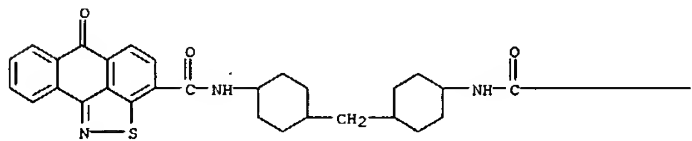
RN 6396-95-8 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(1-methyl-1,2-ethanediyl)bis[6-oxo- (9CI) (CA INDEX NAME)

L8 ANSWER 88 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

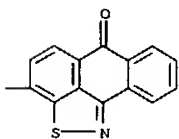


RN 6396-99-2 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(methylenedi-4,1-cyclohexanediyl)bis[6-oxo- (9CI) (CA INDEX NAME)

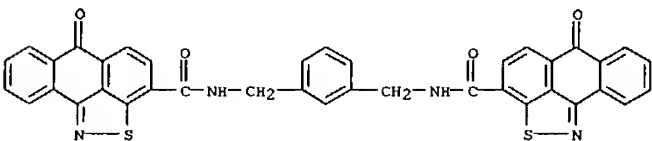
PAGE 1-A



PAGE 1-B

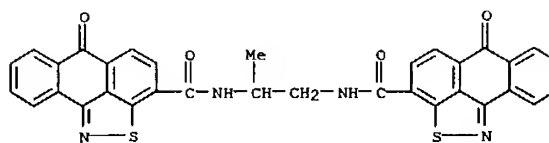


RN 6551-50-4 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(1,3-phenylenebis(methylene))bis[6-oxo- (9CI) (CA INDEX NAME)

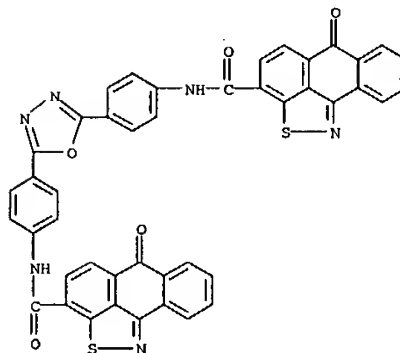


10071390

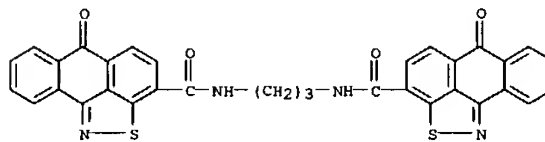
L8 ANSWER 88 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 6396-96-9 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(1,3,4-oxadiazole-2,5-diyl)bis[6-oxo- (9CI) (CA INDEX NAME)



RN 6396-97-0 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-1,3-propanediylbis[6-oxo- (9CI) (CA INDEX NAME)



RN 6396-98-1 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-1,2-ethanediylbis[6-oxo- (9CI) (CA INDEX NAME)

L8 ANSWER 89 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1966:85072 CAPLUS  
 DOCUMENT NUMBER: 64:85072  
 ORIGINAL REFERENCE NO.: 64:16030b-f  
 TITLE: Dyes containing amino-amido groups  
 INVENTOR(S): Pfister, Xaver  
 PATENT ASSIGNEE(S): Sandoz Ltd.  
 SOURCE: 35 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 653018		19641231	BE	
FR 1407958			FR	
			CH	19630913

GI For diagram(s), see printed CA Issue.  
 AB Comps. containing groups of the general formula NH(CORNH)nCORNHR1, where R is arylene and R1 is acyl or aroyl, are prepared and can be used to dye paper, resins, textiles, rubber, and poly(vinyl chloride) (I). Thus, 22.3 parts II (R = X = Y = Z = H) in 300 parts PhC is treated 1 hr. at 130° with a solution of 24 parts p-O2NC6H4COCl in 30 parts PhCl to give II (X = Y = Z = H, R = p-O2NC6H4CO) (III). Similarly prepared are 5-(4-nitrobenzoylamino)-1,9-isothiazolanthrone, II (X = Y = Z = H, R = p-H2NC6H4CO) (IV), II (Y = Z = H, R = p-O2NC6H4CO, X = PhNH), II (X = Y = H, R = p-O2NC6H4CO, Z = 2,4,6-Me3C6H2NH), II (X = Y = Z = H, R = 4-phthalimidobenzoyl) (V), II (Y = Z = H, R = p-O2NC6H2CO, X = BzNH), II (Y = Z = H, R = 3,4-Me(O2N)C6H3CO), II (Y = Z = H, R = p-O2NC6H4CO, X = p-O2NC6H4CONH), the reaction product (reddish yellow pigment) of 8 parts II (R = Z = H, X = NH2, Y = MeO) and 20.3 parts p-BzNHC6H4COCl. III (30 parts) in 500 parts alc. is treated for 1 hr. at 80° with 47 parts 60% Na2S to give IV. Similarly prepared are 5-(4-aminobenzoylamino)-1,9-isothiazolanthrone (VI), II (Y = H, R = p-H2NC6H4CO, X = PhNH), II (X = Y = H, R = p-H2NC6H4CO, Z = 2,4,6-Me3C6H2NH), II (Y = Z = H, R = p-H2NC6H4CO, X = BzNH) (VIa), II (X = Y = Z = H, R = 3,4-Me(H2N)C6H3CO), II (Y = Z = H, R = p-H2NC6H4CO, X = p-H2N6H4CONH). A mixture of 6.8 parts IV, 4.6 parts p-AcNHC6H4COCl, and 120 parts PhCl is agitated for 4 hrs. at 130° to give a yellow dye for I. Similarly prepared are (shade on I given): reaction product of VI and 4-phthalimidobenzoyl chloride, yellow; II (X = Y = Z = H, R = p-(p-H2NC6H4CONH)C6H4CO) (VIb), yellow; II (Y = Z = H, R = p-(p-O2NC6H4CONH)C6H4CO, X = PhNH), --; II (Y = Z = H, R = p-(p-H2NC6H4CONH)C6H4CO, X = PhNH) (VII), --; II (X = Y = H, R = p-(p-O2NC6H4CONH)C6H4CO, Z = 2,4,6-Me3C6H2NH), --; II (X = Y = H, R = p-(p-H2NC6H4CONH)C6H4CO, Z = 2,4,6-Me3C6H2NH) (VIII), --; II (X = Y = Z = H, R = p-(p-phthalimidobenzamido)benzoyl], yellow; reaction product of VIb and m-ClC6H4COCl, yellow; reaction product of VIa and p-BzNHC6H4COCl, red; II (X = Y = Z = H, R = p-[3,4-Me(3,4-Me(O2N)C6H3CONH)C6H3CONH] C6H4CO), --; II (X = Y = Z = H, R = p-[3,4-Me(3,4-Me(H2N)C6H3CONH)C6H3CONH] C6H4CO)

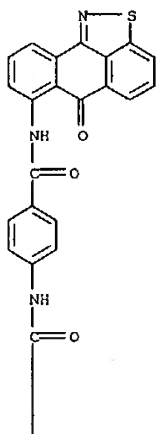
Kamal Saeed

27/09/2004

10071390

L8 ANSWER 89 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
(IX), --; reaction product of 11.9 parts II (Y = Z = H, R = p-H2NC6H4CO,  
X = p-H2NC6H4CONH) and 15.6 parts p-BzNHC6H4COCl, red. VII (28.7 parts) is  
treated at 125° with 17.0 parts p-BzNHC6H4COCl (X) to give a violet  
pigment for I. Similarly a red compd. is prepd. from VIII and X. V (20  
parts) is treated at 120° with 6 parts N2H4.H2O to give IV.  
Similarly prepd. is VIb. IX (12.2 parts) is treated at 125-30°  
with 4.6 parts BzCl to give a yellow dye.  
IT 5654-57-9, N,4'-Bibenzamide, N'-(6-oxo-6H-anthra[9,1-cd]isothiazol-  
7-yl)-4-phthalimido-  
(preparation of)  
RN 5654-57-9 CAPLUS  
CN Benzamide,  
4-[[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)benzoyl]amino]-N-  
(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A



L8 ANSWER 90 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1965:9494 CAPLUS  
DOCUMENT NUMBER: 62:9494  
ORIGINAL REFERENCE NO.: 62:1771f-h,1772a-d  
TITLE: Anthraquinone disperse dyes  
INVENTOR(S): Eaton, David C.; Irving, Francis  
PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
SOURCE: 8 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 960235		19640610	GB	19610808

GI For diagram(s), see printed CA Issue.

AB Compds. of the general formula I, where 1 or 2 of Z, Z1, Z2, Z3, and Z4  
is

A, are prepared Aqueous dispersions of the prepared dyes give fast  
dyeings on  
aromatic polyester textile materials (II). Thus, 16.65 parts I [Z = A (X  
= Y = Cl), Z1 = Z2 = Z3 = Z4 = H] in 100 parts o-C6H4Cl2 is  
agitated 4 hrs. at 70-80° with 8 parts MeO(CH2)3NH2 in 50 parts  
o-C6H4Cl2 to give I [Z = A [X = Cl, Y = MeO(CH2)3NH], Z1 = Z2 = Z3  
= Z4 = H] (III), a greenish yellow powder, yellow on II. III (5 parts)

is  
added to MeNH2 in 50 parts cresol, and the mixture is agitated at 80°  
as addnl. MeNH2 is introduced to give I [Z = A [X = MeO(CH2)3NH, Y =  
MeNH], Z1 = Z2 = Z3 = Z4 = H], a yellow powder, yellow on II. Similarly  
prepared are the following I [Z, Z1, Z2, Z3, Z4, appearance, and color

on II  
given): A[X = MeO(CH2)3NH, Y = EtOCH2CH2O], H, H, H, H, yellow powder,  
yellow; A[X = MeO(CH2)3NH, Y = HOCH2CH2NH], H, H, H, H, yellow powder,  
yellow; A[X = MeO(CH2)3NH, HOCH2CH2NH], H, MeO, H, H, --, orange-scarlet;  
A[X = MeO(CH2)3NH, Y = EtOCH2CH2O], H, MeO, H, H, --, yellow-orange; A[X

=  
MeO(CH2)3NH, Y = MeNH], H, OH, H, H, --, bluish red; A[X = MeO(CH2)3NH, Y  
= EtOCH2CH2O], H, A[X = MeO(CH2)3NH, Y = EtOCH2CH2O], H, H, --,  
red-violet; NH2, Me, A[X = MeO(CH2)3NH, Y = BuNH], H, H, --, red-violet;  
OH, A[X = Y = MeO(CH2)3NH], OH, H, H, dull red powder, orange-scarlet;

A[X  
= MeO(CH2)3NH, Y = MeNH], H, PhNH, H, H, dark blue powder, blue; A[X =  
EtOCH2CH2O, Y = MeOCH2CH2O(CH2)3NH], H, H, H, H, --, greenish yellow;

NH2,  
MeO, A[X = MeO(CH2)3NH, Y = MeNH], H, H, --, red; A[X = MeO(CH2)3NH, Y =  
MeOH], H, OH, A[X = MeO(CH2)3NH, Y = MeNH], OH, --, blue; NH2, PhO, A[X =  
EtO(CH2)3NH, Y = (HOCH2CH2)2N], H, H, --, blue-red; NH2, CO2Me, A[X = Y =  
EtOCH2CH2O], H, H, --, reddish blue. Similarly prepared are (appearance

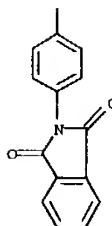
and  
color on II given): 6-[4'-(γ-methoxypropylamino)-6'-yl-  
(methylamino)-1'',3'',5''-triazin-2''-ylamino]phthaloyl-3',4'-  
acridone, --, blue; 5-[4'-(β-(β-butoxyethoxy)ethylamino)-6'-  
butoxy-1',3',5'-triazin-2'-ylamino]isothiazoloanthrone, --,  
orange; 4-[4'-(butylamino)-6''-(β-butoxyethoxy)-1'',3'',5''-triazin-  
2''-ylaminophthaloyl-3',4'-acridone, --, bluish red. Also prepared are

the  
following I [Z, Z1, Z2, Z3, Z4, and color on II given): A[X =  
MeO(CH2)3NH,  
Y = Cl], H, MeO, H, H, yellow-orange; A[X = MeO(CH2)3NH, Y = Cl], H, OH,

Page 23

L8 ANSWER 89 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



L8 ANSWER 90 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
H, H, red; A[X = EtOCH2CH2O, Y = Cl], H, H, H, H, yellow; A[X =  
MeO(CH2)3NH, Y = Cl], H, A[X = MeO(CH2)3NH, Y = Cl], H, H, bluish red;

A[X  
= MeO(CH2)3NH, Y = Cl], H, H, H, A[X = MeO(CH2)3NH, Y = Cl],  
yellow-orange; NH2, Me, A[X = MeO(CH2)3NH, Y = Cl], H, H, blue-red; NH2,  
Me, A[X = Y = Cl], H, H, --; OH, A[X = Y = Cl], OH, H, H, --; A[X =  
MeO(CH2)3NH, Y = Cl], H, PhNH, H, H, --; A[X = Y = Cl], H, PhNH, H, H,

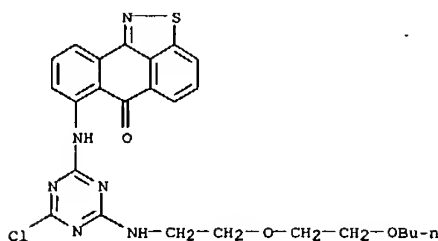
--;  
A[X = MeOCH2CH2O(CH2)3NH, Y = Cl], H, H, H, H, --; NH2, MeO, A[X =  
MeO(CH2)3NH, Y = Cl], H, H, bright bluish red; NH2, MeO, A[X = Y = Cl],  
H,

H, --; A[X = MeO(CH2)3NH, Y = Cl], H, OH, A[X = MeO(CH2)3NH, Y = Cl], OH,  
--; NH2, PhO, A[X = Y = Cl], H, H, --; NH2, PhO, A[X = N(CH2CH2OH)2, Y =  
Cl], H, H, --; NH2, CO2Me, A[X = Y = Cl], H, H, --. Also prepd. are:  
6-[4'-(γ-methoxypropylamino)-6''-chloro-1'',3'',5''-triazin-2''-  
ylamino]phthaloyl-3',4'-acridone (blue on II); 5-[4'-(β-(β-  
butoxyethoxy)ethylamino)-6'-chloro-1',3',5'-triazin-2'-  
ylamino]isothiazoloanthrone; 6-[4'-(β-butoxyethyl-amino)-6'-chloro-  
1',3',5'-triazin-2'-ylamino] - N - methylantrapyridone;  
6-[4',6'-dichloro-1',3',5'-triazin-2'-ylamino]-N-methylantrapyridone.

IT 3352-44-1, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-[[4-[[2-(2-  
butoxyethoxy)ethylamino]-6-chloro-s-triazin-2-yl]amino]-  
3522-36-9, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-[[4-butoxy-6-[[2-  
(2-butoxyethoxy)ethylamino]-s-triazin-2-yl]amino]-  
(preparation of)

RN 3352-44-1 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one,  
7-[[4-[[2-(2-butoxyethoxy)ethylamino]-  
6-chloro-1,3,5-triazin-2-yl]amino]- (9CI) (CA INDEX NAME)



RN 3522-36-9 CAPLUS

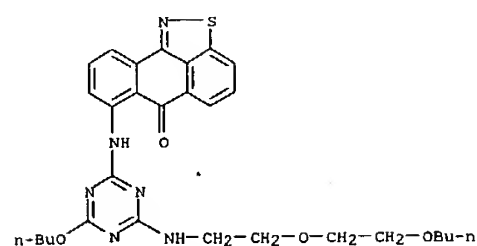
CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-[[4-butoxy-6-[[2-(2-  
butoxyethoxy)ethylamino]-1,3,5-triazin-2-yl]amino]- (9CI) (CA INDEX  
NAME)

Kamal Saeed

27/09/2004

10071390

L8 ANSWER 90 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

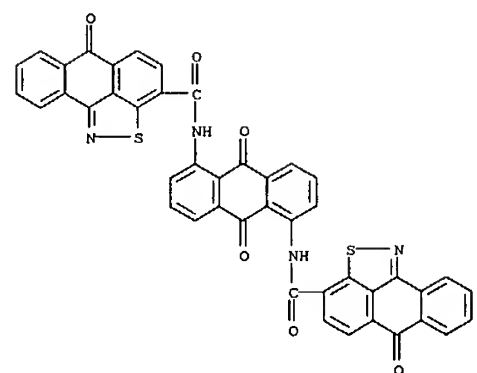


L8 ANSWER 91 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1964:485208 CAPLUS  
DOCUMENT NUMBER: 61:85208  
ORIGINAL REFERENCE NO.: 61:14902c-d  
TITLE: Printing inks and varnishes containing an anthraquinone vat dye  
INVENTOR(S): Graser, Fritz  
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.  
SOURCE: 9 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 636085		19640212	BE	
FR 1366437			FR	
GB 998704			GB	
PRIORITY APPLN. INFO.:			DE	19620816

GI For diagram(s), see printed CA Issue.  
AB Printing inks and varnishes are prepared from I. Thus, a mixt. of 20 parts I (CA 23, 2042), 20 parts Al(OH<sub>3</sub>), and 60 parts boiled linseed oil is ground to give a printing ink which, when used in an offset printing process, gives yellow prints (becoming red) which are fast to light.  
IT 106655-76-9, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-1,5-anthraquinonylene-bis[6-oxo- (inks and varnishes containing yellow)  
RN 106655-76-9 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(9,10-dihydro-9,10-dioxo- 1,5-anthracenediyl)bis[6-oxo- (9CI) (CA INDEX NAME)

L8 ANSWER 91 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 92 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1964:470021 CAPLUS  
DOCUMENT NUMBER: 61:70021  
ORIGINAL REFERENCE NO.: 61:12204g-h, 12205a  
TITLE: Pigment preparation from orange dye  
INVENTOR(S): Graser, Fritz  
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.  
SOURCE: 10 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 635873		19640206	BE	
FR 1365840			FR	
GB 1004076			GB	
PRIORITY APPLN. INFO.:			DE	19620811

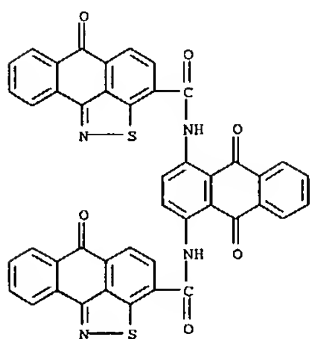
GI For diagram(s), see printed CA Issue.  
AB An orange dye of formula I, previously used only as dye for cotton (U.S. 1,705,023, CA 23, 2042) is suitable as a pigment for plastics (polystyrene, poly(vinyl chloride), polyesters, rubbers, etc.), fibers (natural, regenerated, synthetic, inorganic), and for paints, lacquers and printing inks. When used as a pigment, the dye must be purified, e.g. by treatment with hot PhNO<sub>2</sub> or HCONMe<sub>2</sub>, or by dissoln. in hot concentrated H<sub>2</sub>SO<sub>4</sub> and precipitation with H<sub>2</sub>O. The dye used with such high polymers is stable to elevated temps. and lightfast, does not bleed in solvents and plasticizers, and does not effloresce. It also resists the combination of heat (200-50°) and high shearing forces applied to compounding plastics.  
IT 106655-75-8, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-1,4-anthraquinonylenebis[6-oxo- (pigment for coatings, fibers and plastics)  
RN 106655-75-8 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N,N'-(9,10-dihydro-9,10-dioxo- 1,4-anthracenediyl)bis[6-oxo- (9CI) (CA INDEX NAME)



27/09/2004

10071390

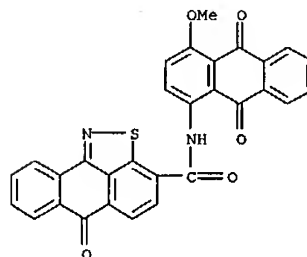
L8 ANSWER 92 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 93 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1964:448358 CAPLUS  
 DOCUMENT NUMBER: 61:48358  
 ORIGINAL REFERENCE NO.: 61:8447a-b  
 TITLE: Black metalized azo dyes  
 INVENTOR(S): Moiso, Ugo; Papa, Sisto S.  
 PATENT ASSIGNEE(S): A.C.N.A.-Aziende Colori Nazionali Affini, S.p.A.  
 SOURCE: 9 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 631166		19630816	BE	
FR 1354563			FR	
GB 1028409			GB	
IT 685870			IT	
PRIORITY APPLN. INFO.:			IT	19620418

AB 1:1 Cr complex of 1,2-[2,4,6-HO(HO3S)(O2N)C10H4N:N]C10H6OH (I) (0.5 mole),  
 0.28 mole 1,2-[2,5-HO(O2N)C6H3N:N]C10H6OH (II), and 0.22 mole 1,2-[2,4-HO(O2N)C6H3N:N]C10H6OH (III) heated 1.5-2 hrs. with 1000 g. urea and 250 cc. HOCH2CH2OH at 125° and poured into 5 l. H2O yielded a black dye which dyed wool and synthetic polyamide fibers reddish black shades of good light and wetfastness. A similar dye was obtained by using 0.5 mole 1:1 Cr complex of I, 0.25 mole II, and 0.25 mole III. MeOCH2CH2OH can be used instead of HOCH2CH2OH as the reaction medium.  
 IT 106410-71-3, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(4-methoxy-1-anthraquinonyl)-6-oxo- (preparation of)  
 RN 106410-71-3 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(9,10-dihydro-4-methoxy-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)



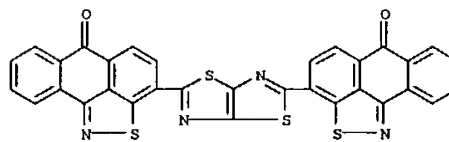
L8 ANSWER 94 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1964:440917 CAPLUS  
 DOCUMENT NUMBER: 61:40917  
 ORIGINAL REFERENCE NO.: 61:7147b-e  
 TITLE: Anthraquinone dyes  
 INVENTOR(S): Neef, Ruetger  
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
 SOURCE: 5 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1162499		19640206	DE	19610805
GB 1010235			GB	
US 3221020		1965	US	

GI For diagram(s), see printed CA Issue.  
 AB The title compds., prepared by condensation of 2 moles of an anthraquinone aldehyde or anil with 1 mole [H2NC(:S)]2 (I) dye wool and cellulose fibers yellow, blue, gray, green, and brown shades fast to wetting, water spotting, and light. Thus, a solution of 1-aminoanthraquinone-2'-aldehyde anil (II) 19.5 and I 3.6 in HCONMe2 150 was boiled for 6 hrs., cooled, and the precipitate filtered to give III (X = H), reddish blue prisms, which dyed cotton dark reddish blue shades from an alkaline vat. Similarly, the following dyes were prepared (reactant and shade on cotton given): 6-chloro-1-aminoanthraquinone-2-aldehyde anil, I, dark blue; anthraquinone-2-aldehyde(IIIa), I, yellow; anthraquinone-2-aldehyde anil (IV), I, II, black-brown; II, 1-amino-4-benzamidoanthraquinone-2-aldehyde anil (V), I, navy blue; II, 1-amino-4-(p-methoxybenzamido)anthraquinone-2-aldehyde anil, I, navy blue; 1-amino-5-benzamidoanthraquinone-2-aldehyde anil (VI), I, blue-black; 1-amino-5-[p-(ethylsulfonyl)benzamido]anthraquinone-2-aldehyde anil, I, blue-black; V, VI, I, greenish blue; thiazoleanthrone-2-aldehyde anil, I, yellow; IV, V, I, yellowish green; IV, VI, I, olive; IIIa V, I, blue-green. 1,4-Diaminoanthraquinone-2-aldehyde anil 34.1 and I 6 in HCONMe2 300 parts were heated to give III (X = NH2) (VII). VII 25 in PhNO2 360 was heated with 2,5-(O2N)2C6H3COCl 19 parts at 80-100°, and heated to 160-205° to give III [X = 2,4-(O2N)2C6H3CONH], bluish gray on cotton. Similarly, VII 20 treated with 4-PhC6H4COCl 15 parts gave a bluish green dye.  
 IT 103283-46-1, 6H-Anthra[9,1-cd]isothiazol-6-one, 3,3'-thiazolo[5,4-d]thiazole-2,5-diylbis- (preparation of)  
 RN 103283-46-1 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3,3'-thiazolo[5,4-d]thiazole-2,5-diylbis- (7CI, 9CI) (CA INDEX NAME)

L8 ANSWER 94 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



27/09/2004

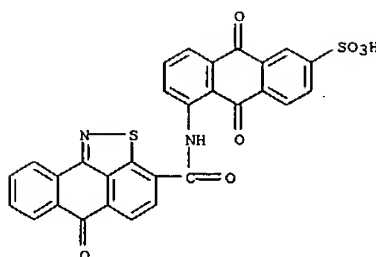
10071390

L8 ANSWER 95 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1964:411803 CAPLUS  
 DOCUMENT NUMBER: 61:11803  
 ORIGINAL REFERENCE NO.: 61:1983h,1984a-e  
 TITLE: (1-Anthraquinonyl)carbamoyl group-containing dyes  
 PATENT ASSIGNEE(S): CIBA Ltd.  
 SOURCE: 34 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 631054		19631104	BE	
FR 1359972			FR	
PRIORITY APPLN. INFO.:			CH	19620418

GI For diagram(s), see printed CA Issue.  
 AB 1-Aminoanthraquinones are treated with dibasic acid chlorides to give vat dyes for cotton. Thus, a mixture of  
 1-amino-5-(benzoylamino)anthraquinone  
 7, m-C6H4(COCl)2 8, and PhNO2 100 parts is ground overnight, heated for 1 hr. at 45° and 1 hr. at 90°, and filtered. The precipitate 4.5 is suspended in N-methylpyrrolidinone (I) 70 at 90°, a solution of Na 1-amino-5-anthraquinonesulfonate 2.86 in I 30 parts added, the mixture heated for 4 hrs. at 90-5° and 2 hrs. at 120-5°, cooled, and filtered to give II, yellow on cotton. Similarly prepared are the following  
 compds. of the formula 3-R'C6H4R (R,R', and color on cotton given): A (X = X' = Z = H, Y = SO3Na), A(X' = Y = Z = H, X = BzNH), yellow; A (X' = Y = Z = H, X = SO3Na), A (X' = Y = Z = H), greenish yellow, A (X' = Y = Z = H, X = SO3Na), A(X' = Y = Z = H, X = 2,3-dichloroquinoxaline-6-carbonylamino), olive yellow; and (color on cotton given): III, greenish blue; IV [R = A (X = X' = Z = H, Y = SO3H)], greenish yellow; V [R = A (X' = Y = Z = H, X = SO3Na)], yellow; V [R = A (X = Y = H, X' = SO3Na, Z = BzNH)], orange-brown; 1,4-bis(1-aminoanthraquinone-2-carbonylamino)anthraquinone-6-sulfonic acid, bordeaux; Na 1-(1,9-isothiazolanthrone-2-carbonylamino)anthraquinone-6-sulfonate, greenish yellow; 1,4-(4-RC6H4NHCO)2C6H4[R = A(X' = Y = Z = H, X = SO3Na)], yellow; Na salts of mono- and disulfonated 2,5-bis(1-amino-4-acetamido-2-anthraquinonyl)-1,3,4-oxadiazole, blue. Also prepared are 3-[N-(5-nitro-1-anthraquinonyl)carbamoyl]benzoic acid and 1-(3-carboxybenzamido)-4-(2,3-dichloroquinoxaline-6-carbonylamino)anthraquinone.  
 IT 106302-12-9, 2-Anthracenesulfonic acid, 9,10-dihydro-9,10-dioxo-5-[(6-oxo-6H-anthra[9,1-cd]isothiazole-3-carboxamido)- (preparation of)  
 RN 106302-12-9 CAPLUS  
 CN 2-Anthracenesulfonic acid, 9,10-dihydro-9,10-dioxo-5-[[[(6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl)carbonyl]amino]- (9CI) (CA INDEX NAME)

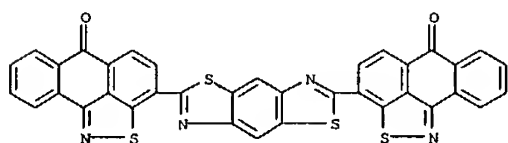
L8 ANSWER 95 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 96 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1964:91457 CAPLUS  
 DOCUMENT NUMBER: 60:91457  
 ORIGINAL REFERENCE NO.: 60:16028b-e  
 TITLE: Anthraquinone dyes  
 INVENTOR(S): Need, Ruetger  
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
 SOURCE: 5 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1164003		19640227	DE	19610805
GB 1019774			GB	
US 3228953		1966	US	

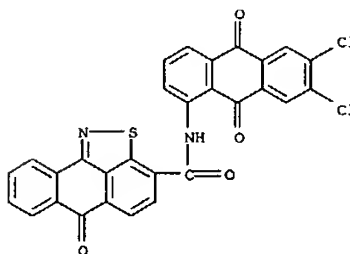
GI For diagram(s), see printed CA Issue.  
 AB Compds. of the general formula I, where X and X' are NH2 or H, Y is Cl or H, and the R groups are substituted amino groups or H, are vat dyes. Thus, 1-amino-2-(phenylformimidoyl)anthraquinone 15 and II 3.9 were boiled for 5 hrs. in HCONMe2 120 and AcOH 20 parts, cooled, filtered, and the crude product recrystd. from boiling PhNO2 to give blue-red needles of I (X = X' = NH2, Y = R = R1 = R2 = R3 = H), which dyed cotton bluish bordeaux from a blue-violet vat. Similarly, other I were prepared (substituents, and shade given): X = X' = R = R1 = R2 = R3 = H, Y = Cl, bluish bordeaux; X = X' = R = R1 = R2 = R3 = Y = H, greenish yellow; X = NH2, X' = R = R1 = R2 = R3 = Y = H, ruby; X = X' = NH2, R = R1 = BzNH, R2 = R3 = Y = H, greenish blue; X = X' = NH2, R = R1 = 2,4-Cl2C6H3CONH, R2 = R3 = Y = H, greenish blue; X = X' = NH2, R = R1 = 4-PhC6H4CONH, R2 = R3 = Y = H, greenish blue; X = X' = NH2, R = BzNH, R1 = R2 = R3 = Y = H, dark blue; X = X' = NH2, R = R1 = Y = H, R2 = R3 = BzNH, corinth; X = X' = NH2, R = R3 = BzNH, R1 = R2 = Y = H, navyblue. III, prepared from thiazolanthrone-2-aldehyde anil and II, gave clear yellow shades from an olive-brown vat.  
 IT 106277-30-9, 6H-Anthra[9,1-cd]isothiazol-6-one, 3,3'-benzo[1,2-d:4,5-d']bisthiazole-2,6-diylbis- (preparation of)  
 RN 106277-30-9 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazol-6-one, 3,3'-benzo[1,2-d:4,5-d']bisthiazole-2,6-diylbis- (7CI) (CA INDEX NAME)



L8 ANSWER 97 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1964:75825 CAPLUS  
 DOCUMENT NUMBER: 60:75825  
 ORIGINAL REFERENCE NO.: 60:13365b-d  
 TITLE: Pigment dye  
 INVENTOR(S): Graser, Fritz  
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.  
 SOURCE: 2 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1162015		19640130	DE	19610425

GI For diagram(s), see printed CA Issue.  
 AB 1,9-Thiazolanthrone-2-carbonyl chloride 30 was added to a suspension of 1-amino-6,7-dichloroanthraquinone (I) 30 in PhNO2 840 parts, the mixture stirred at 150-60° for 3-4 hrs., cooled to 100-10°, the precipitate filtered, washed with hot PhNO2, then with MeOH and H2O to give yellow powdered II, red-orange in concentrated H2SO4, which dyed cotton yellow shades from a blue-gray vat. Poly(vinyl chloride) was colored clear yellow shades fast to plasticizers, and lacquers were colored fast to overspraying. Similarly, II was prepared by treating 1,9-thiazolanthrone-2-carboxylic acid with SOCl2, and condensing with I.  
 IT 104811-06-5, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(6,7-dichloro-1-anthraquinonyl)-6-oxo- (preparation of)  
 RN 104811-06-5 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(6,7-dichloro-9,10-dihydro-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)



27/09/2004

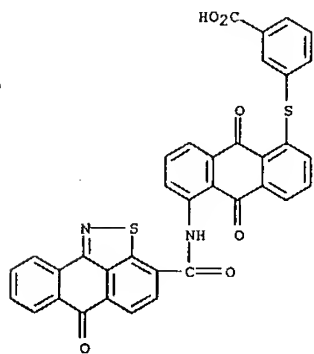
10071390

L8 ANSWER 98 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1963:403994 CAPLUS  
 DOCUMENT NUMBER: 59:3994  
 ORIGINAL REFERENCE NO.: 59:790e-h,791a-f  
 TITLE: Vat dyes  
 PATENT ASSIGNEE(S): CIBA Ltd.  
 SOURCE: 67 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 609670		19620427	BE	
CH 407373			CH	
DE 1194082			DE	
PRIORITY APPLN. INFO.:			CH	19601028

AB Dyes containing preferably an acidic solubilizing group, at least 2 anthraquinone residues or 4 condensed rings, and a hydrocarbon residue linked by a S atom, are vat dyes for cellulosic fibers. Thus, 1-amino-5-(phenylthio)anthraquinone (I) 331, cyanuric chloride (II) 92, and pyridine 1 part in 3000 vols. PhNO<sub>2</sub> are stirred 3 hrs. at 160°, then refluxed 0.5 hr. and cooled to give an orange product (III). III (10 parts) added to 75 vols. 1% oleum at 10°, the solution poured on 300 parts ice, the precipitate redissolved in dilute NaOH and precipitated with NaCl gives IIIA (X = 5-SC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na, Y = Cl) (IV), which dyes cotton fast golden yellow shades. IV (40 parts) in 2000 vols. H<sub>2</sub>O is stirred with 50 vols. N NaOH for 6 hrs. at 70-5°, the excess NaOH neutralized, and NaCl added to precipitate IIIA (X = 5-SC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Na, Y = OH) which dyes cotton bright yellow. IV 10 stirred 1 hr. at 120-5° with POCl<sub>3</sub> 80 and PC15 16 parts, the excess POCl<sub>3</sub> evaporated, the residue ground with ice water, dried, treated with H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>OH and sulfated gives IIIA (X = 5-SC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>OSO<sub>3</sub>Na, Y = OH), a yellow dye. Similarly, the sulfonyl chloride with H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>SSO<sub>3</sub>H gives the SO<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>SSO<sub>3</sub>Na derivative (yellow). Treating III 3 with PhNH<sub>2</sub> 2 and pyridine 0.1 part in 100 vols. o-Cl<sub>2</sub>C<sub>6</sub>H<sub>4</sub> for 20 hrs. at the boil, cooling, filtering, washing the precipitate with MeOH and H<sub>2</sub>O, drying, and sulfonating with oleum gives IIIA (X = 5-SC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na, Y = NHC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na), a yellow dye. Stirring 1-amino-6-chloroanthraquinone 103, II 36.8, and pyridine 1 part in 1400 vols. PhNO<sub>2</sub> for 3 hrs. at 160°, refluxing 0.5 hr., cooling, filtering, washing and drying the precipitate, stirring the latter 20.9, PhSH 11, and K<sub>2</sub>CO<sub>3</sub> 7 parts in 300 vols. amyl alc. for 15 hrs. at the boil, cooling, filtering, washing the precipitate with MeOH and H<sub>2</sub>O, drying, adding 10 parts of the product to 80 vols. 5% oleum, stirring 1 hr., pouring the mixture on ice, filtering, washing the precipitate, redissolving

L8 ANSWER 98 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 redn. of the NO<sub>2</sub> group to NH<sub>2</sub>, acylation with VIII, and sulfonation gives a violet dye.  
 IT 1773-58-6, Benzoic acid, m-[[5-(6-oxo-6H-anthra[9,1-cd]isothiazol-3-carboxamido)-1-anthraquinonyl]thio]- (preparation of)  
 RN 1773-58-6 CAPLUS  
 CN Benzoic acid, 3-[[[9,10-dihydro-9,10-dioxo-5-[[6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl]carbonyl]amino]-1-anthracenyl]thio]- (9CI) (CA INDEX NAME)



L8 ANSWER 98 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 in dil. NaOH, and pptg. with NaCl gives IIIA (X = 6-SC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na, Y = SC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na) which dyes cotton bright yellow. Similar dyes are prepd. by condensing the following intermediates and sulfonating: I and 2,4-dichloro-6-phenyl-1,3,5-triazine (V) (yellow); I and 2,4-dichloro-6-(2-hydroxy-1-naphthyl)-1,3,5-triazine (VI) (yellow); 1-amino-6-(2-naphthylthio)anthraquinone and VI (yellow); I and m-C<sub>6</sub>H<sub>4</sub>(COCl)<sub>2</sub> (VII) (yellow); I and 2,5-thiophenedicarboxylic acid chloride (VIII); 1-aminoanthraquinone (IX) and 2,4-dichloro-6-(phenylthio)- 1,3,5-triazine: 1-chloroanthraquinone and m-C<sub>6</sub>H<sub>4</sub>(SH)<sub>2</sub> (yellow); 3,3'-dichloroindanthrone and PhSH (blue); dibromoanthanthrone and PhSH (reddish blue); 8,16-dichloroaccedianthrone and PhSH (brown); I and 2,8-dibromochrysene (brown); I and 1,5-dichloroanthraquinone (gray). Alternatively, sulfonated I is used as an intermediate or prepd. from p-HSC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H and 1-amino-5-nitroanthraquinone (X). Sulfonation of 6-(phenylthio)anthraquinone-2,1(N)-benzocridone gives a violet dye. The condensation product of perylene-3,4,9,10-tetracarboxylic acid with 2 moles m-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, converted into the diacid chloride with SOCl<sub>2</sub> in PhNO<sub>2</sub> with pyridine, reacts with I to form a product which, on sulfonation, yields a scarlet vat dye. The mixed condensation product from 1 mole I with 1 mole 4-aminoanthraquinone-1(N)-2-benzocridone on sulfonation gives an olive-green dye; the mixed condensation product of VIII with I and 1-amino-4-methoxyanthraquinone on sulfonation gives a monosulfonate dyeing cotton orange. Refluxing 28.7 parts 1-chloro-5-nitroanthraquinone (XI) for 8 hrs. in 500 vols. Me<sub>2</sub>CHOH with 15.5 parts p-HSC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H and 12 parts KOH, cooling, pouring into 5000 vols. H<sub>2</sub>O, filtering, adding urea to the filtrate, and acidifying gives 1-chloro-5-(4-carboxyphenylthio)anthraquinone, which is converted with PhSH into the phenylthio deriv., the acid chloride of which is condensed with IX and sulfonated to give a yellow dye. Acylation of X with p-PhSC<sub>6</sub>H<sub>4</sub>COCl and redn. of the NO<sub>2</sub> group followed by condensation with and sulfonation gives a yellow dye. Condensation of 1-amino-5-(3-carboxyphenylthio)anthraquinone (XII) with VIII gives a H<sub>2</sub>O-sol. yellow dye without sulfonation. Likewise, condensing the diacid chloride of 1,5-bis(4-carboxyphenylthio)anthraquinone with 1 mole IX and hydrolysis gives a yellow dye with 1 COOH group. Condensation of 5,10-dianilino-3,8-dichloro-1,6-pyrenequinone with o-HSC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H gives a yellowish green dye; condensation of the acid chloride of isothiazolanthraquinone-2-carboxylic acid with XII a yellow dye. Refluxing 40 parts of the Na salt of the condensation product (XIII) from 2 moles 1-aminoanthraquinone-5-sulfonic acid and 1 mole V with 9 parts HSC<sub>2</sub>CH<sub>2</sub>OH and 13.5 parts KOH in 500 vols. H<sub>2</sub>O, and sulfonation of the product gives a yellow dye contg. SCH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>Na groups in the 5-position of the anthraquinone nuclei. Similarly, reaction of XIII with HSC<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>H and KOH gives a yellow dye. Condensation of 1-(amino-6-anthraquinonylthio)acetic acid with V gives another yellow dye. The condensation product of 1-amino-5-chloroanthraquinone with m-C<sub>6</sub>H<sub>4</sub>(SH)<sub>2</sub>, treated with HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>COCl-p gives a yellow dye. Conversion of 1-amino-4-nitroanthraquinone-2-carboxylic acid with PhSH into the 4-phenylthio deriv. and with SOCl<sub>2</sub> into the 2-acid chloride, followed by condensation with H<sub>2</sub>NNH<sub>2</sub>. H<sub>2</sub>O gives the hydrazide which, when treated with oleum, forms a blue oxadiazole dye. Condensation of X with PhSCH<sub>2</sub>CO<sub>2</sub>H,

L8 ANSWER 99 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1963:403987 CAPLUS  
 DOCUMENT NUMBER: 59:3987  
 ORIGINAL REFERENCE NO.: 59:787h,788a-c  
 TITLE: Anthraquinone or perylenetetracarboxylic acid diimide dyes  
 PATENT ASSIGNEE(S): CIBA, Ltd.  
 SOURCE: 8 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

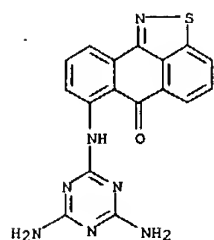
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 897487		19620530	GB	
CH 389133			CH	
DE 1214347			DE	
US 3074945		1963	US	
PRIORITY APPLN. INFO.:			CH	19590506

GI For diagram(s), see printed CA Issue.  
 AB Vat dyes containing melamine residues are prepared by condensing vatable amines with cyanuric chloride (I) and replacing the remaining Cl atoms with nonvatable amines. Thus, a suspension of aminodibenzanthrone 9.4 in anhydrous PhNO<sub>2</sub> 200 at 160-70° is treated with a solution of I 6 in PhNO<sub>2</sub> 40 and pyridine 0.5 part, stirred for 12 hrs. at 170°, cooled, and filtered. The cake of II, X = Y = Cl, is added slowly to 100 parts H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>OH at 150-60°, stirred for 2 hrs., cooled and drowned in H<sub>2</sub>O to give II, X = Y = NHCH<sub>2</sub>CH<sub>2</sub>OH (III), a black dye. Similarly, other II were prepared (X, Y, and shade on cotton given): N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, black (reddish blue vat); NHC<sub>6</sub>H<sub>11</sub>, NHC<sub>6</sub>H<sub>11</sub>, bluish gray (reddish blue vat); NMeCH<sub>2</sub>CH<sub>2</sub>OH, NMeCH<sub>2</sub>CH<sub>2</sub>OH, greenish black; NET<sub>2</sub>, NET<sub>2</sub>, bluish gray to bluish black; NMePh, NHCH<sub>2</sub>CH<sub>2</sub>OH, black; NMe<sub>2</sub>, NHCH<sub>2</sub>CH<sub>2</sub>OH, reddish black. III 6.7 in PhNO<sub>2</sub> 100 treated with SOCl<sub>2</sub> 6 and pyridine 0.1 part and the mixture stirred for 6 hrs. at 140-50° gave II, X = Y = NHCH<sub>2</sub>CH<sub>2</sub>Cl, a bluish black dye. Other dyes were also prepared (components and shade on cotton given): 5-amino-1,9-isothiazoleanthrone, I, 2 moles NH<sub>3</sub>, - [orange in poly(vinyl chloride) (IV)]; 5,5'-diamino-1,1'-dianthrimide carbazole, 1 mole I, 2 moles NH<sub>3</sub>, rust-brown; bis [p-aminophenylimide] (V): of perylenetetracarboxylic acid, 2 moles I, 4 moles NH<sub>3</sub>, red (red in IV); m-isomer of V, 2 moles I, 4 moles MeNHCH<sub>2</sub>CH<sub>2</sub>OH, red; amino-accedianthrone, I, 2 moles NH<sub>3</sub>, brown. IT 101231-70-3, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-[(4,6-diamino-s-triazin-2-yl)amino]- (preparation of)  
 RN 101231-70-3 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-[(4,6-diamino-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)

27/09/2004

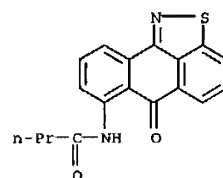
10071390

L8 ANSWER 99 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 100 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1963:400088 CAPLUS  
DOCUMENT NUMBER: 59:88  
ORIGINAL REFERENCE NO.: 59:10e-f  
TITLE: Identification of organic compounds. XLVIII.  
Identification of disperse dyes by paper chromatography  
AUTHOR(S): Gasparic, J.; Gemzova-Taborska, I.  
CORPORATE SOURCE: Vyzkumny Ustav Org. Synth., Pardubice-Rybitvi, Czech.  
SOURCE: Collection of Czechoslovak Chemical Communications (1962), 27, 2996-3052  
CODEN: CCCCAK; ISSN: 0010-0765  
DOCUMENT TYPE: Journal  
LANGUAGE: German  
AB Approx. 600 com. disperse dyes were chromatographed (descending technique) in 1:1 or 2:1 C5H5N:H2O on Whatman Number 3 paper impregnated with a 10% 1-bromonaphthalene in CHCl3. In some cases, impregnation with 5% lauryl alc. in EtOH (90% HOAc; 1:1 EtOH-NH4OH; 1:1 EtOH-N HCl) or with 20% alc. HCONH2 (2:1 hexane-C6H6; C6H6; C6H6-CHCl3 as the mobile phase) was also used. The Rf values were tabulated.  
IT 61931-40-6, C.I. Disperse Yellow 51 (chromatography of)  
RN 61931-40-6 CAPLUS  
CN Butanamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)



L8 ANSWER 101 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1962:469779 CAPLUS  
DOCUMENT NUMBER: 57:69779  
ORIGINAL REFERENCE NO.: 57:13934b-f  
TITLE: Anthraquinone dyes free from water-solubilizing groups  
INVENTOR(S): Anon.  
PATENT ASSIGNEE(S): Ciba Soc.  
SOURCE: 30 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 609673		19620427	BE	
CH 398843			CH	
DE 1183189			DE	
GB 965006			GB	
PRIORITY APPLN. INFO.:			CH	19601028

GI For diagram(s), see printed CA Issue.

AB Water-insol. anthraquinone derivs. of the general formula I, containing 21 arylthio group are vat dyes for cotton or disperse dyes for poly(ethylene terephthalate). For example, 220 parts PhSH, 7000 vols.

96% EtOH, 125 parts KOH, and 257 parts 1-amino-5-chloroanthraquinone were heated on a boiling water bath for 15 hrs. with stirring to give a 90% yield of 1-amino-5-phenylthioanthraquinone which dyes cellulose esters and polyester fibers golden yellow shades of good fastness. Similarly, other I were prepared (X, X', Y, Y', and color given): NH2, PhS, NH2, PhS, blue;

NH2, PhS, NH2, H, ruby red; NH2, H, 2-H2NC6H4S, H, golden yellow; Cl, H, PhS, H, lemon yellow; Cl, Cl, PhS, H, -; NO2, H, PhS, H, greenish yellow; OH, OH, PhS, H, orange; OH, PhNH, PhS, OH, dark blue; PhS, PhS, NH2, H, pink; OH, PhS, OH, PhS, navy blue; PhCH2NH, H, PhS, H, orange; BzNH, H, PhS, H, yellow; p-O2NC6H4CONH, H, PhS, H, yellow; PrCONH, H, PhS, H, yellow; BzNH, PhS, BzNH, PhS, blue-violet; p-PhC6H4CONH, H, PhS, H, yellow; p-O2NC6H4CONH, PhS, p-O2NC6H4-CONH, PhS, red violet; BzNH, PhS, BzNH, H, red brown; PrCONH, PhS, PrCONH, PhS, violet; p-RNHC6H4CONH (R is 4-amino-6-chloro-s-triazin-2-yl), H, PhS, H, yellow; R'NH (R' is 4,6-dichloro-s-triazin-2-yl) H, PhS, H, yellow; R''NH (R'' is 4-chloro-6-phenyl-s-triazin-2-yl), H, PhS, H, yellow; and NCS, H, PhS, H, yellow. Also prepared was 7-phenylthio-6H-anthra [9,1-cd] isothiazol-6-one,

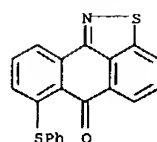
a yellow dye.

IT 16195-55-4, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-(phenylthio)- (preparation of)

RN 16195-55-4 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-(phenylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)

L8 ANSWER 101 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



27/09/2004

L8 ANSWER 102 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1962:443678 CAPLUS  
DOCUMENT NUMBER: 57:43678  
ORIGINAL REFERENCE NO.: 57:8766c-f  
TITLE: Dyeing or printing aromatic polyester fibers  
PATENT ASSIGNEE(S): CIBA Ltd.  
SOURCE: 4 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

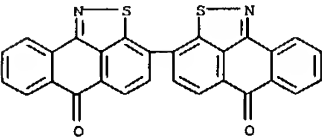
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 898912		19620614	GB	
CH 367798			CH	
DE 1221606			DE	
US 3100132		1963	US	
PRIORITY APPLN. INFO.:			CH	19600127

GI For diagram(s), see printed CA Issue.  
AB Polyester fibers can be dyed by using as the dye 5(acylamino)-1,9-isothiazole-anthrones (I), where R is Ph or 3-pyridyl. An aqueous dispersion of finely divided dye is prepared in the presence of a dispersing agent, such as a synthetic detergent and a swelling agent, and the dyeing process is carried out under superatm. pressure at 120°. Preferably, the fabric, after dyeing and drying, is heated at 140-210° to fix the dye. For example, clean polyester fibrous material 100 is immersed in a dye bath containing H2O 3000, (NH4)2HPO4 9, and the Na salt of N-benzyl-μ-heptadecylbenzimidazolesulfonic acid 1.5 parts and treated for 15 min. at 50°. Then 9 parts of o-PhC6H4ONa is dissolved in H2O and slowly added; the liberated o-PhC6H4OH is taken up by the textile by moving the latter in the bath for 15 min at 50-5°. The dye paste, prepared by grinding 1 part of an aqueous paste of I (R = Ph) with 1 part of dry sulfite-cellulose waste liquor to form a fine paste having a dye content of 10%, is then added. The bath is boiled for 1-1.5 hrs. The material when rinsed is yellow and has excellent fastness to sublimation and light.  
IT 10116-20-8, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-benzamido-98655-82-4, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-nicotinamido-(dyeing and printing of poly(ethylene terephthalate) and other polyesters with)  
RN 10116-20-8 CAPLUS  
CN Benzamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)

L8 ANSWER 103 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1962:61130 CAPLUS  
DOCUMENT NUMBER: 56:61130  
ORIGINAL REFERENCE NO.: 56:11758d-g  
TITLE: Anthraquinone pigment dyes for the dyeing of high-molecular-weight organic products  
INVENTOR(S): Caliezi, Armin  
PATENT ASSIGNEE(S): CIBA Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

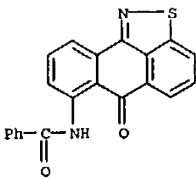
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1109359		19610622	DE	19581003
CH 360369			CH	
FR 1322306			FR	
GB 880575			GB	

GI For diagram(s), see printed CA Issue.  
AB The title compds. of the general formula I, where X is S (II) or NH (III), are suitable for pigment dyeing high-mol.-weight organic products yellow shades having high light- and migration-fastness. Thus, 5 g. II (Ger. 343,065) mixed with 95 g. dioctyl phthalate was ground in a ball mill until the dye particles were <3 μ. The paste (0.8 g.), mixed with 13 g. poly(vinyl chloride), 7 g. dioctyl phthalate, 0.1 g. Cd stearate and 1 g. TiO2, was rolled 5 min. on a 2-roller corn mill at 140° to give a light- and migration-fast dye. A mixture of 0.125 g. III (Ger. 255,641, CA 7, 1981), 40 g. nitrocellulose lacquer and 2.735 g. TiO2 ground 16 hrs. gave a lacquer suitable for painting Al foils. Other examples dealt with the use of II and III in pigment dyeing of acetate rayon, cotton, paper, alkyd-melamine baking enamels, and in preparing a textile printing paste.  
IT 106571-52-2, [3,3'-Bi-6H-anthra[9,1-cd]isothiazole]-6,6'-dione (pigments of)  
RN 106571-52-2 CAPLUS  
CN [3,3'-Bi-6H-anthra[9,1-cd]isothiazole]-6,6'-dione (7CI, 9CI) (CA INDEX NAME)

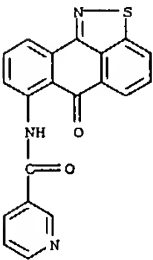


10071390

L8 ANSWER 102 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 98655-82-4 CAPLUS  
CN 3-Pyridinecarboxamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)

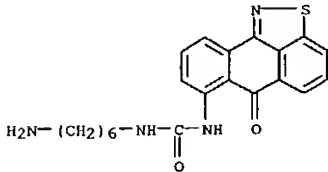


(dyeing and printing poly(ethylene terephthalate) and other polyesters)

L8 ANSWER 104 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1961:10900 CAPLUS  
DOCUMENT NUMBER: 55:10900  
ORIGINAL REFERENCE NO.: 55:2126d-f  
TITLE: Compositions for dyeing and printing of polyacrylonitrile  
INVENTOR(S): Rhyner, Paul; Grossmann, Paul  
PATENT ASSIGNEE(S): C I B A Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

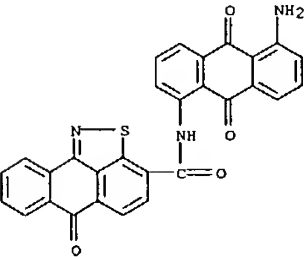
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 345631		19600531	CH	

AB Preps. containing NH2SO3H and an anthraquinone dye, free from acid, H2O-solubilizing groups, but which contains an aliphatic NH2 group, show good fastness to light, laundering and perspiration, when used to dye polyacrylonitrile fibers. Thus is prepared 1-(2-aminoethylamino)anthraquinone (I), m. 144° (EtOH), by treating 48.4 parts 1-chloroanthraquinone with 120 parts ethylenediamine. I 10 and NH2SO3H 2 are milled together, dissolved in AcOH 3, diluted with H2O 500 parts, and boiled with polyacrylonitrile yarns for 1 hr. to give fast red dyeings. 7-(6-Aminoethylureido)-6H-anthra[9,1-cd]isothiazol-6-one and NH2SO3H give yellow dyeings.  
IT 116604-88-7, Urea, 1-(6-aminoethyl)-3-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (acrylonitrile-dyeing or -printing compns. containing NH2SO3H and)  
RN 116604-88-7 CAPLUS  
CN Urea, 1-(6-aminoethyl)-3-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (6CI) (CA INDEX NAME)



L8 ANSWER 105 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1959:72522 CAPLUS  
DOCUMENT NUMBER: 53:72522  
ORIGINAL REFERENCE NO.: 53:13129f-g  
TITLE: Acylamino amino anthraquinones  
INVENTOR(S): Schwechten, Heinz W.; Neeff, Rutger  
PATENT ASSIGNEE(S): Farbenfabriken Bayer Akt.-Ges.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AB	US 2864823		19581216	US	
IT	See Brit. 800,962 (C.A. 53, 8095q).				
RN	6336-95-4, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-1-anthraquinonyl)-6-oxo-				
CN	(preparation of)				
	6336-95-4 CAPLUS				
	6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-9,10-dihydro-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)				



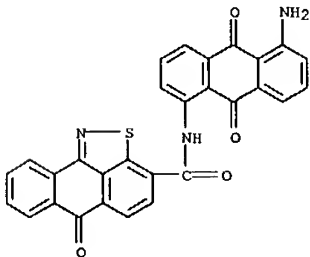
L8 ANSWER 106 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
ethoxycarbiminophenyl)ethylene-HCl (VIIc), m. 160°;  
1,2-di-p-anisyl-2-(p-ethoxycarbiminophenyl)chloroethylene (VIII), m. 167°.  
Similarly 9-(p-cyanobenzal)fluorene gave 9-(p-ethoxycarbiminobenzal)fluorene-HCl (IX), m. 263-4°;  
1-(p-cyanophenyl)-1-phenyl-2-(p-chlorophenyl)ethylene gave 1-(p-ethoxycarbiminophenyl)-1-phenyl-2-(p-chlorophenyl)ethylene-HCl (X), m. 174° (from the cyano compd. m. 171-2°), and m. 161° (from the cyano compd. m. 126-30°).  
2,7-Dichloro-9-(p-cyanobenzal)fluorene gave 2,7-dichloro-9-(p-ethoxycarbiminobenzal)fluorene-HCl (XI); 2-cyano-9-anisalfuorene gave 2-ethoxycarbimino-9-anisalfuorene-HCl (XIa), m. 140°;  
1,1-di-p-anisyl-2-(p-cyanophenyl)bromoethylene gave 1,1-di-p-anisyl-2-(p-ethoxycarbiminophenyl)bromoethylene (XIb), m. 144-5°.  
4-Methyl-4-chlorobenzophenone and p-BrC6H4CH2MgBr gave 1-p-tolyl-1-(p-chlorophenyl)-2-(p-bromophenyl)ethylene which reacted with CuCN in quinoline to give 1-p-tolyl-1-(p-chlorophenyl)-2-(p-cyanophenyl)ethylene which gave the corresponding ethoxy compd. (XIII).  
Similarly starting with 4-methoxy-4'-chlorobenzophenone an ethoxy compd. (XIII) was obtained. 9-(p-Cyanobenzal)fluorene in CHCl3 with Cl in CCl4 gave 9-(p-chloro-p-cyanobenzal)fluorene which gave the corresponding ethoxy compd. (XIV). 1,1-di-p-anisyl-2-(m-bromophenyl)ethylene in EtOAc with PtO2 and H gave 1,1-di-p-anisyl-2-(m-bromophenyl)ethane which with CuCN in quinoline gave 1,1-di-p-anisyl-2-(m-cyanophenyl)ethane (XV), b0.4 232-4°. XV gave as before 1,1-di-p-anisyl-2-(m-ethoxycarbiminophenyl)ethane-HCl (XVI), m. 130°. Similarly, 1-(p-bromophenyl)-1-phenyl-2-(p-chlorophenyl)ethylene gave 1-(p-cyanophenyl)-1-phenyl-2-(p-chlorophenyl)ethylene, m. 150-8° which gave the 1-p-ethoxy compd. HCl salt (XVII), m. 166°.  
Following the procedure used to prepare IVa, V gave 1,2-di-p-anisyl-1-(p-guanylphenyl)ethylene-HCl, m. 226°; VI gave 1,2-diphenyl-1-(m-guanylphenyl)ethylene-HCl, m. 234-7° (from the isomer, m. 117°) and m. 237.5-8.5° (from the isomer m. 142°);  
VII gave 1,1-di-p-tolyl-2-(p-guanylphenyl)ethylene-HCl, m. 314°;  
VIIa gave 1,1-bis(p-chlorophenyl)-2-(p-guanylphenyl)ethylene-HCl, m. 306-7°; VIIb gave 1-(o-chlorophenyl)-1-(p-chlorophenyl)-2-(p-guanylphenyl)ethylene-HCl, m. 315°; VIII gave 1,2-di-p-anisyl-2-(p-guanylphenyl)chloroethylene-HCl, m. 135°; IX gave 9-(p-guanylbenzal)fluorene-HCl, m. 308°; XI gave 2,7-dichloro-9-(p-guanylbenzal)fluorene-HCl, m. 315°; XII gave 1-p-tolyl-1-(p-chlorophenyl)-2-(p-guanylphenyl)ethylene-HCl, m. 260-70°; XIII gave 1-p-anisyl-1-(p-chlorophenyl)-2-(p-guanylphenyl)ethylene-HCl, m. 220-8°; VIIc gave 1,1-bis(p-dimethylaminophenyl)-2-(p-guanylphenyl)ethylene-HCl, m. 173°; XIV gave 9-(p-chloro-p-guanylbenzal)fluorene; XIa gave 2-guanyl-9-anisalfuorene-HCl, m. 130°; XIb gave 1,1-di-p-anisyl-2-(p-guanylphenyl)bromoethylene-HCl, m. 237°; XIV gave 1,1-di-p-anisyl-2-(m-guanylphenyl)ethane, m. 200°; XVII gave 1-(p-guanylphenyl)-1-phenyl-2-(p-chlorophenyl)ethane-HCl, m. 274-9°. X gave, as described for the prepn. of IIa, 1-(p-guanylphenyl)-1-phenyl-2-(p-chlorophenyl)ethylene-HCl, m. 290° (from the isomer m. 174°) and m. 245° (from the isomer m. 161°). II (9.6 g.), 3.4 g. ethylenediamine (XVIII), and 25 ml. abs. EtOH refluxed 24 hrs. treated with H2O to ppt. a gum, which is dissolved in alc. HCl and pptd. by Et2O, gave 1,1-di-p-anisyl-2-(p-2-imidazolinyphenyl)ethylene-HCl, m. 261-2°. Similarly VII and XVIII gave 1,1-bis(p-chlorophenyl)-2-(p-(2-imidazolinyphenyl)ethylene-HCl, m. 282°. II (8.5 g.) was converted to its free base and refluxed with 1.8 ml. 1,3-diaminopropanol and 25 ml. abs. EtOH, concd., and alc. HCl added to give 1,1-di-p-anisyl-2-[p-(2-(1,4,5,6-

L8 ANSWER 106 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1959:72520 CAPLUS  
DOCUMENT NUMBER: 53:72520  
ORIGINAL REFERENCE NO.: 53:13128a-i,13129a-f  
TITLE: Guanyl-substituted triphenylethanes, triphenylethylenes, and benzalfluorenes  
INVENTOR(S): Van Campen, Marcus G., Jr.; Allen, Robert E.; Palopoli, Frank P.; Schumann, Edward L.  
PATENT ASSIGNEE(S): Wm. S. Merrell Co.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AB	US 2877269		19590310	US	
IT	The title compds. have antiinflammatory and antifungal action.				
RN	1,1-Di-p-anisyl-2-(p-cyanophenyl)ethylene (I) (27.2 g.) in 38 g. anhydrous EtOH and 500 ml. C6H6 was saturated with HCl at 5°.				
CN	After 3 days, evaporation gave 1,1-di-p-anisyl-2-(p-ethoxycarbiminophenyl)ethylene-HCl (II), m. 131°.				
	II (13.5 g.) in 100 ml. CHCl3 with 160 g. ice is brought to pH 8. The CHCl3 layer is concentrated, dissolved in 65 ml. EtOH, 2.5 g. NH4Cl in 5 ml. H2O is added at 60° and the mixture stirred 6 hrs. Concentration gave 1,1-di-p-anisyl-2-(p-guanylphenyl)ethylene-HCl (IIa), m. 252-6°.				
	Replacement of I by 1,2-di-p-anisyl-1-(m-cyanophenyl)ethylene and 1,1-di-p-anisyl-2-(m-cyanophenyl)ethylene gave 1,2-di-p-anisyl-1-(m-ethoxycarbiminophenyl)ethylene-HCl (III), m. 119-20°, and 1,1-di-p-anisyl-2-(m-ethoxycarbiminophenyl)ethylene-HCl (IV), m. 140°, resp. III (4 g.) in 20 ml. absolute EtOH at -50° was treated with 2 g. liquid NH3, refluxed 6 hrs., filtered, diluted with Et2O to give 1,2-di-p-anisyl-1-(m-guanylphenyl)ethylene-HCl (IVa), m. 208-10°. Similarly IV gave 1,1-di-p-anisyl-2-(m-guanylphenyl)ethylene-HCl, m. 232-3°. To 200 ml. 0.28N Et2NMgBr was added 13.6 g. 1,1-di-p-anisyl-2-(o-cyanophenyl)ethylene in 100 ml. Et2O and 100 ml. C6H6. After refluxing 6 hrs., a 10% NaOH solution was added, the organic layer separated, concentrated, and dissolved in alc. HCl and extracted with CHCl3. The washed and dried extract was concentrated to give 1,1-di-p-anisyl-2-[o-(N,N-diethylguanyl)phenyl]ethylene, m. 109-10°; HCl salt, m. 221-2°. By the procedure described earlier, the appropriate cyanophenylethylene compds. were converted to 1,2-di-p-anisyl-1-(p-ethoxycarbiminophenyl)ethylene-HCl (V), m. 118-20°; 1,2-diphenyl-1-(m-ethoxycarbiminophenyl)ethylene-HCl (VI), m. 142° (from the cyano compound, m. 135-7°), and m. 117° (from the cyano compound, m. 168-9°); 1,1-di-p-tolyl-2-(p-ethoxycarbiminophenyl)ethylene-HCl (VII), m. 148°; 1,1-bis(p-chlorophenyl)-2-(p-ethoxycarbiminophenyl)ethylene-HCl (VIIa), m. 129-30°; 1-(o-chlorophenyl)-1-(p-chlorophenyl)-2-(p-ethoxycarbiminophenyl)ethylene-HCl (VIIb), m. 110-30°; 1,1-bis(p-dimethylaminophenyl)-2-(p-				

L8 ANSWER 106 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
tetrahydropyrimidyl)phenyl]ethylene-HCl, m. 238-40°. II (10 g.), 4 g. piperidine (XIX), and 25 ml. abs. EtOH kept 2 days, concd., and treated with alc. HCl gave 1,1-di-p-anisyl-2-(p-piperidinocarbiminophenyl)ethylene-HCl, m. 150°. X, m. 161° (10 g.), 2.2 g. XIX, and 35 ml. abs. EtOH was refluxed 6 hrs. and treated as above to give 1-(p-piperidinocarbiminophenyl)-1-phenyl-2-(p-chlorophenyl)ethylene-HCl, m. 225°. Similarly XVII and XIX gave 1-(p-piperidinocarbiminophenyl)-1-phenyl-2-(p-chlorophenyl)ethane-HCl, m. 258°. VIIc.3HCl (6 g.), 1.05 ml. XIX, 5.5 ml. Et3N, and 25 ml. abs. EtOH was refluxed 2 hrs., CHCl3 added and 1,1-bis(p-dimethylaminophenyl)-2-(p-piperidinocarbiminophenyl)ethylene-HCl, m. 152°, pptd. by EtOAc and Et2O. II (8.5 g.), 4.9 g. 1-diethylamino-4-aminopentane, and 35 ml. abs. EtOH was refluxed 2 hrs., concd. and dissolved in 10% HCl, converted to the free base and treated with alc. HCl to give 1,1-di-p-anisyl-2-[p-(N-1-diethylamino-4-pentylguanyl)phenyl]ethylene-2HCl, m. 140°. IX (15.5 g.), 4.1 g. β-diethylaminoethylamine (XX) and 50 ml. EtOH kept 16 hrs. and treated as above gave 9-[p-(N-β-diethylaminoethyl)guanylbenzal]fluorene-HCl, m. 297°. Similarly, II and XX gave 1,1-di-p-anisyl-2-[p-N-(β-diethylaminoethyl)guanylphenyl]ethylene-HCl, m. 239°.

IT 6336-95-4, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-1-anthraquinonyl)-6-oxo- (preparation of)  
RN 6336-95-4 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-9,10-dihydro-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)

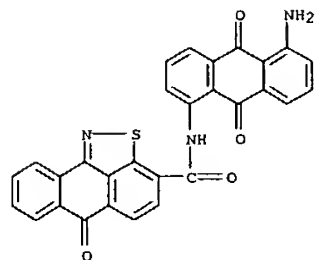


27/09/2004

10071390

L8 ANSWER 107 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1959:45107 CAPLUS  
DOCUMENT NUMBER: 53:45107  
ORIGINAL REFERENCE NO.: 53:8096a-d  
TITLE: Alkylenimides of aminocarboxylic acids  
INVENTOR(S): Petersen, Siegfried; Gauss, Walter  
PATENT ASSIGNEE(S): Farbenfabriken Bayer Akt.-Ges.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 939151		19560216	DE	
AB	Compds. useful as intermediates for pharmaceuticals, textile auxiliaries, dyes, and plastics are prepared by heating N-carboxylic anhydrides of aromatic or mixed aromatic-aliphatic amino acids with alkylenimines in an organic solvent. Ethylenimine (55 cc.) in 500 cc. EtOH is mixed gradually with 163 g. isatoic acid anhydride (CO <sub>2</sub> evolves vigorously), and the mixture heated slightly a short time before adding H <sub>2</sub> O to give on standing 77% anthranilic acid N-ethylenimide, m. 68.5-9°. Similarly prepared are: 2-amino-5-bromo benzoic acid ethylenimide, m. 95°; 2-amino-3,5-dichloro-benzoic acid ethylenimide, m. 69.5-70°; 2-aminonaphthalene-3-carboxylic acid ethylenimide, yellow plates, m. 130-1°; 2-amino-5-nitrobenzoic acid ethylenimide, m. 140-50°; 2-amino-5-nitrobenzoic acid propylenimide, yellow needles, m. 152.5-3.5°; 2-amino-5-nitrobenzoic acid isobutylenimide, yellow needles, m. 165-6°; phenylaminoacetic acid ethylenimide, m. 69.5-70°; 4,4'-diaminobiphenyl-3,3'-dicarboxylic acid bis(N,N-ethylenimide), m. 172°.				
IT	6336-95-4, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-1-anthraquinonyl)-6-oxo- (preparation of)				
RN	6336-95-4 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-9,10-dihydro-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)				

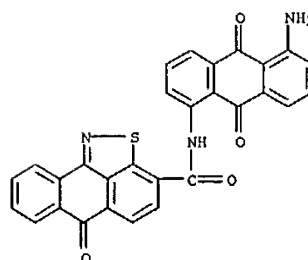


L8 ANSWER 108 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1959:45105 CAPLUS  
DOCUMENT NUMBER: 53:45105  
ORIGINAL REFERENCE NO.: 53:8095g-i, 8096a  
TITLE: Acylamino amino anthraquinones  
PATENT ASSIGNEE(S): Farbenfabriken Bayer Akt.-Ges.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 800962		19580903	GB	
AB	Valuable precursors in the manufacture of vat dyes are prepared by acylating 1-amino-5-benzoylaminoanthraquinone (I) or 1-amino-4-benzoylaminoanthraquinone (II) with N-heterocyclic carboxylic acids (III), saponifying the benzoyl group of the diacyls with concentrated H <sub>2</sub> SO <sub>4</sub> (IV) at 40-100° a short time, diluting the mixts. with H <sub>2</sub> O, and boiling the precipitated sulfates in dilute NH <sub>3</sub> to liberate the free anthraquinones. Thus, 40 g. compound obtained by acylating I with isonicotinic acid (V) dissolved in 460 g. 96% H <sub>2</sub> SO <sub>4</sub> , heated 15 min. at 90°, H <sub>2</sub> O at 20-30° added dropwise to reduce the concentration of the H <sub>2</sub> SO <sub>4</sub> to 50%, the yellow needles filtered off with suction, washed with 50% H <sub>2</sub> SO <sub>4</sub> , boiled in H <sub>2</sub> O, and NH <sub>3</sub> added gave 1-isonicotinoylamino-5-aminoanthraquinone, red needles, brownish red needles from aniline or quinoline, dissolves in IV with greenish yellow color. Acylated product from II and V (40 g.) dissolved in 460 g. IV, heated 15 min. at 70°, the mixture cooled, added to ice, the precipitate filtered off, and boiled in dilute NH <sub>3</sub> yields 1-isonicotinoylamino-4-aminoanthraquinone, small blue needles, violet needles from nitrobenzene (VI), dissolves in IV with a red color. In essentially the same manner, the following 1-acylamino-5-aminoanthraquinones are prepared from I and III (acyl group given): nicotinoyl; picolinoyl; quinoline-8-carbonyl, orange-red flakes from pyridine; quinoline-6-carbonyl and quinoline-4-carbonyl, both brownish red needles from VI; 5,6-phthaloylquinoline-8-carbonyl, light-red crystalline powder from H <sub>2</sub> O and long brownish red needles from VI; 1,9-isothiazoylanthrone-2-carbonyl, reddish brown needles from VI; 1,9-anthrapyrimidine-2-carbonyl, red crystals from dilute NH <sub>3</sub> and fine brownish red needles from VI.				
IT	6336-95-4, 6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-1-anthraquinonyl)-6-oxo- (preparation of)				
RN	6336-95-4 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazole-3-carboxamide, N-(5-amino-9,10-dihydro-9,10-dioxo-1-anthracenyl)-6-oxo- (9CI) (CA INDEX NAME)				

L8 ANSWER 107 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L8 ANSWER 108 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



27/09/2004

10071390

L8 ANSWER 109 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1958:108338 CAPLUS  
DOCUMENT NUMBER: 52:108338  
ORIGINAL REFERENCE NO.: 52:191501,19151a-c  
TITLE: Anthraquinone vat dyes  
INVENTOR(S): Schwechten, Heinz W.  
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2830989		19580415	US	
DE 1077813			DE	

GI For diagram(s), see printed CA Issue.

AB Dyes of the general formula I are prepared, in which R is an 8-hydroxyquinolyl or phthaloyl-8-hydroxyquinolyl group and if n is 1 R' is

a radical of the anthrapyrimidinecarboxylic or oxoanthrisothiazolecarboxylic acid or if n is 2 R' is the radical of dicarboxylic aliphatic or aromatic acid. Thus, 1-(8-quinolylcarbonylamino)-5-aminoanthraquinone (I) (20 g.) in 400 cc. dry PhNO<sub>2</sub> was heated to 160° with stirring and 5 g. p-C<sub>6</sub>H<sub>4</sub>(COCl)<sub>2</sub> was slowly added. The mixture was heated slowly to the b.p. until the evolution

of HCl subsided, the precipitate filtered off at 90°, and washed with warm

PhNO<sub>2</sub> and MeOH to give a product (II), dyeing cotton from a dark-gray vat in greenish yellow shades of very good fastness properties, particularly to light. 1,9-Anthrapyrimidine-2-carboxylic acid in o-C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub> was converted to the acid chloride (III) with SOCl<sub>2</sub>. III was treated with II to give a product, dyeing cotton from a ruby-colored vat in greenish yellow shades of very good fastness to light. Similarly, 1-(5,6-phthaloylquinoline-8-carboxylamino)-5-aminoanthraquinone (IV) and p-C<sub>6</sub>H<sub>4</sub>(COCl)<sub>2</sub> as well as IV and 6-oxo-6-anthra[9,1]isothiazole-3-carboxylic acid gave yellow dyes.

IT 121526-47-4, Naphtho[2,3-f]quinoline-5-carboxamide, 7,12-dihydro-7,12-dioxo-N-[5-(6-oxo-6H-anthra[9,1-cd]isothiazole-3-carboxamido)-1-anthraquinonyl]- (preparation of)

RN 121526-47-4 CAPLUS

CN Naphtho[2,3-f]quinoline-5-carboxamide, N-[9,10-dihydro-9,10-dioxo-5-[[6-oxo-6H-anthra[9,1-cd]isothiazol-3-yl]carbonyl]amino]-1-anthracenyl]-7,12-dihydro-7,12-dioxo- (9CI) (CA INDEX NAME)

L8 ANSWER 110 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1958:9114 CAPLUS  
DOCUMENT NUMBER: 52:9114  
ORIGINAL REFERENCE NO.: 52:1636a-f  
TITLE: Anthrone derivatives  
INVENTOR(S): Grossmann, Paul; Jenny, Walter  
PATENT ASSIGNEE(S): C I B A Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2805225		19570903	US	

AB New anthrone derivs., after a pasting treatment coupled with precipitation from

H<sub>2</sub>SO<sub>4</sub>, are suitable for dyeing and printing hydrophobic fibrous materials,

such as cellulose esters, superpolyamides, superpolyurethans, and poly(ethylene terephthalate) fibers, strong tints of excellent fastness to

light, even in a bath containing a swelling agent. 7-Amino-6H-anthr[9,1]isothiazol-6-one 12.6 in 95% H<sub>2</sub>SO<sub>4</sub> 150 and water 110 is treated with NaNO<sub>2</sub> 3.75 in 95% H<sub>2</sub>SO<sub>4</sub> 37.5 at 20-30°, then heated to 95-100° with water 220 parts to give 7-hydroxy-6H-anthr[9,1]isothiazol-6-one (I), soluble in organic solvents with yellow color;

it dyes Terylene greenish yellow with excellent fastness to light; similarly 7-amino-6H-anthra[1,9-bc]thiophen-6-one is converted to 7-hydroxy-6H-anthra[1,9-bc]thiophen-6-one, olive powder, soluble in H<sub>2</sub>SO<sub>4</sub> bluish red, soluble in organic solvents yellow; it dyes cellulose acetate yellow

after pasting. 5-Hydroxy-1-chloroanthraquinone 12 in the form of an aqueous

paste 32 is heated for 12 hrs. at 120-5° under stirring with water 55, 60% Na<sub>2</sub>S 25, S 10, and 25% NH<sub>4</sub>OH 50 parts. The precipitated dye is filtered,

washed free from sulfide ions with 3% NaHCO<sub>3</sub> solution, suspended in water,

acidified with HCl, and washed neutral to give I; similarly, 5-hydroxyanthraquinone-1-sulfonic acid gives I; 7-methoxy-6H-anthr[9,1]isothiazol-6-one.10, heated in 85% H<sub>2</sub>SO<sub>4</sub> 100 parts for 1 hr. at 140° gives I. 1-Hydroxyanthraquinone-5-selenocyanide (II) 31, and 22% NH<sub>4</sub>OH 380 parts are heated for 5 hrs. at 150-60°, cooled, and filtered. The residue is washed neutral with hot water and dried and crystallized from AcOH with addition of animal C to give yellow needles,

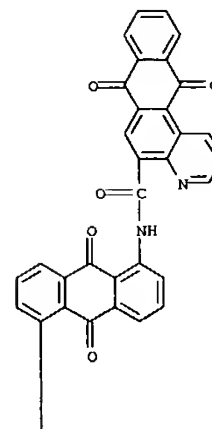
m. 225°, which dye cellulose acetate, silk, and Terylene a strong yellow shade. II is prepared from 1-hydroxy-5-aminoanthraquinone by diazotization and heating with KSeCN to give yellow crystals (from anisole). 7-Hydroxy-6H-anthr[9,1]isothiazol-6-one 5, and anhydrous

AcONa 5 are refluxed in Ac<sub>2</sub>O 100 parts for 4.5 hrs., poured into cold water, and filtered. The residue is washed with water and dried to give pale-yellow crystals, m. 214° (from glacial AcOH), which dye cellulose acetate and Terylene a strong greenish yellow tint. 7-Amino-2-methylanthra[1,9]pyrazol-6(2H)-one 50 is dissolved in concentrated H<sub>2</sub>SO<sub>4</sub>

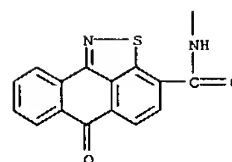
250 at room temperature, diazotized at 0-10° with NaNO<sub>2</sub> 15 and concentrated

L8 ANSWER 109 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



L8 ANSWER 110 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
parts, stirred for 4 hrs. at room temp., water 400 parts is added, stirred

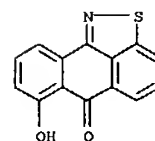
for 1 hr. at the boiling temp., filtered by suction, washed, and dried at 60° to give orange crystals, m. 234° (from C<sub>6</sub>H<sub>5</sub>Cl), which dye cellulose acetate and Terylene a strong gold-yellow tint. Cf. C.A. 49, 16448g.

IT 108748-47-6, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-hydroxy-131409-50-2, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-hydroxy-, acetate

(preparation of)

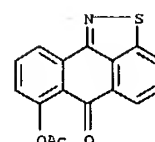
RN 108748-47-6 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-hydroxy- (6CI) (CA INDEX NAME)



RN 131409-50-2 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-hydroxy-, acetate (6CI) (CA INDEX NAME)





27/09/2004

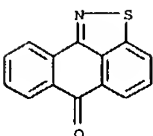
10071390

L8 ANSWER 111 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1957:103394 CAPLUS  
DOCUMENT NUMBER: 51:103394  
ORIGINAL REFERENCE NO.: 51:18632h-i,18633a-i,18634a-e  
TITLE: New phosphoric acid derivatives  
INVENTOR(S): Petitcolas, Pierre; Richard, Andre P.; Goupil, Rene  
PATENT ASSIGNEE(S): Compagnie Francaise des Matieres Colorantes  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1009369		19520528	FR	

GI For diagram(s), see printed CA Issue.  
AB The preparation is described of a series of new derivs. of H3PO4 of the general type I, where R may represent the group CH:CH.CH:CH, Ar and Ar', are substituted or unsubstituted aryl groups, and X is halogen, an HO group, or its salt or ester. 2,3-(HO)C10H6CONHPh (Ia) 70 parts in toluene 400 volume parts is refluxed 14 hrs. with Ph-OP(O)Cl2 (II) 75 parts: the solvent 150 volume parts is distilled off. The residual mixture diluted with C6H6 200 volume parts and allowed to stand deposits compound IIa (Ar = Ph), m. 173° (from C6H6). Similarly, 2,3-(HO)C10H6CONHC10H7-2 (III) gives IIa (Ar = 2-C10H7), m. 185° (from C6H6). The dye (IV) 70 parts from diazotized o-ClC6H4NH2 and Ia in toluene 1200 volume parts is heated to boiling with the removal of toluene 300 volume parts. The mixture is treated with POCl3 33 parts, refluxed for 6 hrs., and cooled; the crystalline deposit recrystd. from PhCl yielded I (Ar = o-ClC6H4, Ar' = Ph, X = Cl) (V), long reddish yellow needles. (Ar, Ar', and X will be given in this order in parentheses throughout the abstract) The dye 130 parts from diazotized 2,4-H2N(C1)C6H3Me and Ia in toluene 3000 volume parts, dried by distillation, is treated with POCl3 75 parts, refluxed for 8 hrs., treated again with POCl3 20 parts, refluxed for 4 hrs., and cooled to give I (2,5-MeClC6H3, Ph, Cl) (VI), yellow, m. 257°. VI heated with moist pyridine 5 parts gives the pyridinium salt (VII) of I (2,5-MeClC6H3, Ph, OH) (VIII), as a red-orange solution. The solution of VII treated with hot dilute HCl yielded the cyclic ester of VIII, reddish yellow crystals. The dye 100 parts from diazotized 2,5-H2N(C1)C6H3Me and Ia in PhCl 2000 volume parts is refluxed for 6 hrs. with POCl3 50 parts to give I (2,4-MeClC6H3, Ph, Cl) needles, m. 278°. The dye 100 parts from diazotized 2,4-H2N(C1)C6H3Me and the o-phenetide of 2,3-HOC10H6CO2H in PhCl 2000 volume parts is distilled to remove PhCl 250 parts, refluxed for 15 hrs. with POCl3 50 parts, filtered, and distilled to remove PhCl 1300, and the residue allowed to stand gave I

L8 ANSWER 111 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
gives with XXII the compd. I (5,2-ClMeC6H3, Ph, 2,4-Cl2C6H3O), red needles, m. 203°. The dye 50 from XIII and XIX gives with XXII the compd. I (5,2-ClMeC6H3, p-ClC6H4, 2,4-Cl2C6H3O), yellow needles, m. 207°. The dye 50 from XIII and the p-chloroanilide of 2-hydroxy-3-carbazolecarboxylic acid and XXII gives an analogous compd. of type I, yellow needles, m. 259°. In the same manner is prepd. I (o-ClC6H4, Ph, 2-C10H7O), needles, m. 234°, from 2-C10H7OP(O)Cl2 (XXIII). XIII, III, and XXIII yield I (5,2-ClMeC6H3, 2-C10H7, 2-C10H7O), gold-yellow, m. 215° (from PhCl). The dye from 2,5-Cl2C6H3NH2 and Ia gives with XXIII the compd. I (2,5-Cl2C6H3, Ph, 2-C10H7O), yellow, m. 240°. XX 40 and 1-C10H7OP(O)Cl2 42 parts yield I (5,2-ClMeC6H3, Ph, 1-C10H7O), yellow needles, m. 198° (from PhCl). o-ClC6H4NH2 Ia, and 1-C10H7OP(O)Cl2 give I (2-ClC6H4, Ph, 1-C10H7O), yellow needles, m. 240° (from PhCl). The dye from o-ClC6H4NH2 and III treated in the usual manner with MeOP(O)Cl2 in PhCl yields I, (o-ClC6H4, 2-C10H7, MeO), m. 276°. The dye from 2,4-H2N(O2N)C6H3OMe and 2,3-HOC10H6CONHC6H4OMe-o gives similarly I (2,4-MeO(O2N)C6H3, o-MeOC6H4, MeO), gold-yellow, 234°. In a similar manner is prepd. from the dye from XIII and Ia the compd. I (5,2-ClMeC6H3, Ph, MeO) (XXIV), m. 272°, which is also obtained by using BuOP(O)Cl2 as the phosphorylating agent. VII 0.5 part in pyridine 1 vol. part and thiodiglycol 1 part treated with a soln. 3 vol. parts of ZnO 10 parts in H2N(CH2)2OH 100 parts given a printing paste which yielded red shades.  
IT 6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (derivs., as pigment dyes for paper pulp, viscose spinning dopes and plastic materials)  
RN 6313-41-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)

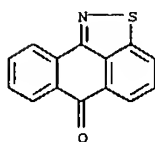


L8 ANSWER 111 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
(2,4-MeClC6H3, o-EtOC6H4, Cl) (IX), yellow-orange, m. 210° (from PhCl). IX 50 parts refluxed with pyridine 100 parts, dild. with PhCl 250 vol. parts, cooled, and filtered gave the pyridinium salt of I (2,4-MeClC6H3, o-EtOC6H4, OH). The dye (X) 200 parts from diazotized 2,4-H2N(C1)C6H3Me and 2,3-(HO)C10H6 CONHC10H7-1 (Xa) in PhCl 3000 vol. parts is distd. to remove PhCl 300 vol. parts, treated with POCl3 100 parts, refluxed for 8 hrs., and distd. to remove PhCl 1000 vol. parts. The residual mixt. is allowed to stand overnight to give I (5,2-ClMeC6H3, 2-C10H7, Cl) (XIa), yellow, m. 255° (from PhCl); it gives with moist pyridine the pyridinium salt of the corresponding acid. I (o-ClC6H4, 2-C10H7, Cl) (XI) 10 is dissolved at 70-80° in pyridine, and the mixt. poured slowly into dil. HCl to ppt. I (o-ClC6H4, 2-C10H7, OH) (XII). XII 5 in 50% EtOH 50 contg. NaOH (48° B.acte.e.) 2 parts is heated to boiling, treated with C, and filtered, and the filtrate is treated with NaOH (48° B.acte.e.) 5 vol. parts to give the Na salt of XII, plates. A series of cyclic phosphoryl chlorides of the type I (X = Cl) were prepd. in the usual manner from a no. of azo dyes (components of the azo dye used, color, and m.p. of the cryst. chlorides given): 2,5-Cl2C6H3NH2, Ia, yellow, 335°; 2,4-H2N(C1)C6H3Me (XIII), 2,3-HOC10H6CONHC6H3ClMe-4,2, orange, 222°; 2,4-H2N(C1)C6H3OMe, 2,3-HOC10H6CONHC6H3OMe-o, orange, 243°; XIII, 2,3-HOC10H6CONHC6H3(Cl)OMe-5,2, reddish orange, 214°; XIII, 2,3-HOC10H6CONHC6H4Cl-p, orange, 298°; 2,4-H2N(O2N)C6H3OMe, 2,3-HOC10H6CONHC6H4Me-o (XIV), brown, 272°; 2,4-H2N(O2N)C6H3Me (XIVa), Xa orange, 287°; XIII, XIV, yellow-orange, 251°; XIII, 2,3-HOC10H6CONHC6H2(OMe)2Cl-2,4,5 (XV), orange, 250°; o-MeC6H4NH2 (XVI), 2,3-HOC10H6CONHC6H4NO2-m, reddish, 251° (decomph.); XVI, 2-HOC10H6CONHC10H7-1, yellow, 291° (decomph.); XIVa, 2-HOC10H6CONHPh (XVII), yellow-orange, 293°; XIII, 2-HOC10H6CONHC6H4Cl-m, orange, 266°; o-ClC6H4NH2, 2-HOC10H6CONHC10H7-2, orange, 268°; 2,5-H2N(O2N)C6H3Me, XVII, brownish orange, 265°; and 2,5-MeO(O2N)C6H3NH2, XVII, red-orange, 295° (decomph.). Xia 20 heated to boiling in slightly wet PhCl 400 for 4 hrs. and filtered gave the corresponding acid (X = OH), 278°. The dye 100 parts from diazotized o-ClC6H4NH2 and Ia in o-C6H4Cl2 1000 vol. parts dried by the distn. of solvent 200 vol. parts, cooled to 100°, refluxed for 20 hrs. with II 60 parts, and allowed to stand overnight yielded I (o-ClC6H4, Ph, PhO), (XVIII), yellow needles, m. 137° (from PhCl). The dye 100 parts from XIII and 2,3-HOC10H6CONHC6H4Cl-p (XIX) in o-C6H4Cl2 and II 94 parts yielded I (5,2-ClMeC6H3, p-ClC6H4, PhO), m. 238°. The dye (XX) from XIII and 2,3-HOC10H6CONHPh (XXI) and II yields similarly I (5,2-ClMeC6H3, Ph, PhO), yellow-orange, m. 212°. In the same manner is prepd. I (2,5-Cl2C6H3, Ph, PhO), yellow needles, m. 257°. The dye from XIVa and XXI treated in the usual manner with II gives I (2,5-Me(O2N)C6H3, Ph, PhO). The dye 50 parts from XIII and XV gives in the usual manner with II 42 parts I (5,2-ClMeC6H3, 5,2,4-Cl(MeO)2C6H2, PhO), yellow, m. 233°. The dye 50 from o-ClC6H4NH2, Ia, and p-ClC6H4OP(O)Cl2 60 parts yields I (2-ClC6H4, Ph, p-ClC6H4O), yellow needles, m. 196°. I (5,2-ClMeC6H3, Ph, p-ClC6H4O), yellow needles, m. 228°, is prepd. similarly. 2,4-Cl2C6H3OH 326 and POCl3 460 parts refluxed and distd. give 2,4-Cl2C6H3OP(O)Cl2 (XXII), b22 165°. The dye from XIII and Ia

L8 ANSWER 112 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1957:103393 CAPLUS  
DOCUMENT NUMBER: 51:103393  
ORIGINAL REFERENCE NO.: 51:18632h  
TITLE: Isothiazolanthrone pigment dyes  
INVENTOR(S): Gutzwiller, Ernst; Schoenauer, Wolfgang  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 317470		19570115	CH	

AB See Brit. 733,460 (C.A. 50, 2181e).  
IT 6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (derivs., as pigment dyes for paper pulp, viscose spinning dopes and plastic materials)  
RN 6313-41-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)

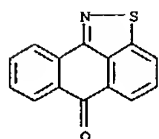


27/09/2004

10071390

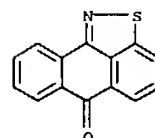
L8 ANSWER 113 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1957:103392 CAPLUS  
DOCUMENT NUMBER: 51:103392  
ORIGINAL REFERENCE NO.: 51:18632f-h  
TITLE: Preparation of acid dyes derived from anthrapyridone,  
and new dyes resulting thereof  
INVENTOR(S): Kienzle, Paul  
PATENT ASSIGNEE(S): Compagnie Francaise des Matieres Colorantes  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	FR 1015963		19521029	FR	
AB	1-Chloroacetamido-2-methyl-4-chloroanthraquinone, m. 239-41°, is cyclized by heating with pyridine. The pyridinium salt of the cyclized product is treated with Na hydrosulfite to give 6-chloro-4-methyl-7-H-dibenz [f,i]isoquinoline-2,7(3H)-dione (I). Condensation of I with PhNH <sub>2</sub> in the presence of KOAc and Cu(OAc) <sub>2</sub> gives red crystals (II), m. 340-2° (from C <sub>6</sub> H <sub>4</sub> Cl <sub>2</sub> or pyridine). The Ph group of II is sulfonated. The product dyes wool red shades.				
IT	6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (derivs., as pigment dyes for paper pulp, viscose spinning dopes and plastic materials)				
RN	6313-41-3 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)				



L8 ANSWER 114 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1957:69049 CAPLUS  
DOCUMENT NUMBER: 51:69049  
ORIGINAL REFERENCE NO.: 51:12499i  
TITLE: Sulfonated 5-acylamino-1,9-isothiazolanthrones  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

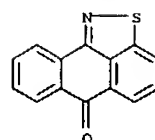
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 775957		19570529	GB	
AB	See U.S. 2,733,976 (C.A. 50, 9752a).				
IT	6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (sulfonated 7-acylamino derivs.)				
RN	6313-41-3 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)				



L8 ANSWER 115 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1956:50887 CAPLUS  
DOCUMENT NUMBER: 50:50887  
ORIGINAL REFERENCE NO.: 50:9752a-e  
TITLE: Sulfonated 5-acylamino-1,9-isothiazolanthrones  
INVENTOR(S): Bucheler, Paul; Peter, Albin  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2733976		19560207	US	
	DE 1040153			DE	
AB	A series of 5-acylamino derivs. (I) of 1,9-isothiazolanthrone (II) was prepared. The I are valuable yellow acid dyes for wool, silk, and polyamide fibers. 5-Chloroacetamido-1,9-isothiazolanthrone 10, PhOH 30, 40% aqueous NaHSO <sub>3</sub> 65, and 30% aqueous NaOH 34 stirred at 100° until a test sample was soluble in hot H <sub>2</sub> O, the mixture poured into H <sub>2</sub> O 1000, the solution heated to 95° and filtered hot, the filtrate treated with Na <sub>2</sub> SO <sub>4</sub> 100 parts and cooled, and the precipitate filtered with suction, washed with 10% aqueous Na <sub>2</sub> SO <sub>4</sub> , and dried gave the 5-HO <sub>3</sub> SCH <sub>2</sub> OCNH derivative (III) of II which dyed polyacrylonitrile fibers and fabric by the cupro-ion method yellow shades of excellent light- and wash-fastness. The 5-Cl(CH <sub>2</sub> ) <sub>2</sub> CONH derivative of II 5, 40% aqueous NaHSO <sub>3</sub> , and 30% aqueous NaOH 34 stirred 7 hrs. at 130° in an autoclave, and the mixture poured into H <sub>2</sub> O 1000, heated to 95°, filtered hot, and treated with Na <sub>2</sub> SO <sub>4</sub> 100 parts gave the 5-HO <sub>3</sub> S(CH <sub>2</sub> ) <sub>2</sub> CONH derivative of II, which dyed wool, silk, and polyamides bright-yellow shades from acid solution, and polyacrylonitrile fibers by the cupro-ion method yellow shades. The MeCHBrCONH derivative of II 11, PhOH 30, and 50% neutral aqueous K <sub>2</sub> SO <sub>3</sub> 50 stirred at 100°, and the mixture heated in H <sub>2</sub> O 800 parts to 98° and worked up in the usual manner gave the 5-HO <sub>3</sub> SCHMeCONH derivative of II, which dyed yellow shades. Similarly prepared were the following I (5-acylamino group given): iso-PrCH(SO <sub>3</sub> H) CONH, HO <sub>3</sub> SCH Bu CONH, HO <sub>3</sub> S(CH <sub>2</sub> ) <sub>5</sub> CONH, which all dye yellow shades on polyacrylonitrile fiber. Washed skein or hank 100 of polyacrylonitrile staple fiber introduced at 70° into a bath containing Cu screen or netting 20, III 1, crystalline CuSO <sub>4</sub> 1, concentrated HCO <sub>2</sub> H 4, and H <sub>2</sub> O 4000 parts and the bath heated 80 min. to boiling dyed the textile material a fast yellow; the bath was completely exhausted.				
IT	6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (sulfonated 7-acylamino derivs.)				
RN	6313-41-3 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)				

L8 ANSWER 115 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

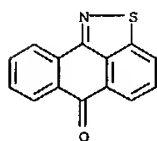


27/09/2004

10071390

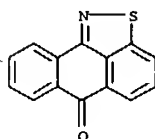
L8 ANSWER 116 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1956:10539 CAPLUS  
DOCUMENT NUMBER: 50:10539  
ORIGINAL REFERENCE NO.: 50:2182a  
TITLE: Isothiazolanthrone pigment dyes  
INVENTOR(S): Gutzwiller, Ernst; Schoenauer, Wolfgang  
PATENT ASSIGNEE(S): Sandoz A.-G.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2714596		19550802	US	
AB	See Brit. 733,460 (preceding abstract).				
IT	6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (derivs., pigment dyes from)				
RN	6313-41-3 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)				



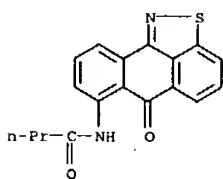
L8 ANSWER 117 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1956:10538 CAPLUS  
DOCUMENT NUMBER: 50:10538  
ORIGINAL REFERENCE NO.: 50:2181e-i  
TITLE: Isothiazolanthrone pigment dyes  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 733460		19550713	GB	
GI	For diagram(s), see printed CA Issue.				
AB	A number of new pigment dyes were prepared by heating 5-amino-1,9-isothiazolanthrone (I) with a halobenzanthrone of a haloanthraquinone. Thus, I 55, Bz-1-bromobenzanthrone 70, Na2CO3 25, crystalline CuSO4 2.5, and				
	PhNO2 350 parts stirred about 16 hrs. at 180-210°, the resulting water removed by a gentle air stream, the mixture filtered at 80°, and the residue washed with EtOH and hot H2O and dried gave 5-benzanthronylamino-1,9-isothiazolanthrone (II), dark crystalline powder. II				
	30 in 96-100% H2SO4 180 stirred into H2O 2000 parts at 70-80°, the precipitate filtered, washed neutral, milled with				
	dinaphthylmethanedisulfonic acid, and worked into a paste gave a dye paste which produced scarlet-brown to scarlet shades. I 120 and 1-chloroanthraquinone 130 parts gave 5-(1-anthraquinonylamino)-1,9-isothiazolanthrone; it gave red shades of very good fastness properties in paper masses and on printing. I 26 and 1,5-dichloroanthraquinone 13.5 parts gave in the usual manner 1,5-bis(1,9-isothiazolanthron-5-ylamino)anthraquinone which produced very fast Bordeaux-colored dyeings during the spinning process. I 36 and 2-chloroanthrone 16 parts gave similarly 5-(2-anthraquinonylamino)-1,9-isothiazolanthrone which dyed spinning dopes brownish red shades of very good fastness properties. Examples for the coloring of paper pulp, the dyeing of ripened viscose solution, and the printing on textiles are given.				
IT	6313-41-3, 6H-Anthra[9,1-cd]isothiazol-6-one (derivs., pigment dyes from)				
RN	6313-41-3 CAPLUS				
CN	6H-Anthra[9,1-cd]isothiazol-6-one (8CI, 9CI) (CA INDEX NAME)				



L8 ANSWER 118 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1955:87410 CAPLUS  
DOCUMENT NUMBER: 49:87410  
ORIGINAL REFERENCE NO.: 49:16448g-i  
TITLE: Anthrone derivatives  
INVENTOR(S): Grossmann, Paul; Kern, Walter  
PATENT ASSIGNEE(S): C I B A Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2715128		19550809	US	
GI	For diagram(s), see printed CA Issue.				
AB	5-Amino-1,9-isothiazoleanthrone (I) 25.2 in PhCl 100 refluxed 0.5 hr. with				
	PhNMe2 12.5 and EtCOCl 10 parts, and the mixture cooled and filtered gave the N-EtCO derivative of I; it dyed cellulose acetate green-yellow tints of				
	very good light-fastness. Similar runs with PrCOCl 11.6, Me2CHCOCl 11.6, or valeroyl chloride 13 parts gave the corresponding acyl derivs. of I. 5-Amino-N-methyl-1,9-pyrazoleanthrone-(II) 25, PhCl 100, PhNMe2 12.5, and PrCOCl 11.6 refluxed 0.5 hr. gave the N-PrCO derivative which dyed cellulose acetate pure-yellow tints. 5-Amino-1,9-thiopheneanthrone gave in the same				
	manner with Me2CHCOCl a light-fast green-yellow dye. An example for the dyeing of cellulose acetate artificial silk with the N-EtCO derivative of I is given.				
IT	61931-40-6, Butyramide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (preparation of)				
RN	61931-40-6 CAPLUS				
CN	Butanamide, N-(6-oxo-6H-anthra[9,1-cd]isothiazol-7-yl)- (9CI) (CA INDEX NAME)				



L8 ANSWER 119 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1955:44868 CAPLUS  
DOCUMENT NUMBER: 49:44868  
ORIGINAL REFERENCE NO.: 49:8607i, 8608a-i, 8609a-i, 8610a  
TITLE: Anthraquinone vat dyes  
PATENT ASSIGNEE(S): C I B A Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 719670		19541208	GB	
GI	For diagram(s), see printed CA Issue.				
AB	New anthraquinone vat dyes of the general formula A, where X = R-NH-R' (I) or R-NH-R' (II), in which R is an aromatic residue to which in formula II NH and R' are bound in adjacent positions, R' represents a vatable residue bound to the NH group by a ring C atom which is in a position vicinal to a ring C atom bound to H in the case of formula I or bound directly to R in the case of formula II, and R'' represents a cyclic residue containing at least 1 aromatic 6-membered ring. 2-(o-Chlorobenzamido)-3-anthraquinonenitrile treated with PCl5 yielded 2-(o-chlorophenyl)-4-chloro-6,7-phthaloylquinazoline (III). III 10, 4-amino-2,1-(N)-anthraquinonebenzaziridone (IV) 6.6, and PhOH 200 parts refluxed 15 min., the mixture cooled to about 50°, diluted with pyridine 200 parts, and filtered by suction, the filter cake washed with EtOH and dried, and the crude product repptd. from H2SO4 gave 4-[2-(2-chlorophenyl)-6,7-phthaloyl-4-quinazolylamino]-2,1(N)anthraquinonebenzaziridone (V), green solid. V 2, 1-amino-4-benzamidoanthraquinone (VI) 1, NaOAc 0.5, Na2CO3 0.5, and Cu(OAc)2 0.1 refluxed 7 h. in PhNO2 480 parts, the mixture cooled and filtered by suction, and the residue washed with PhNO2 and EtOH, boiled with dilute HCl, filtered again with suction, washed with H2O, and dried gave the [2-(4-benzamido-1-anthraquinonylamino)phenyl] analog (VII) of V. AlCl3 30 and NaCl 6 fluxed with SO3, the melt treated with VII 1, heated 1 h. at 95-100°, and poured into ice, the mixture filtered with suction, the filter cake washed with H2O, suspended in H2O, treated with a small amount dilute H2SO4 and Na2Cr2O7, 0.3 part, stirred several hrs. at room temperature, and filtered with suction, and the filter residue washed with H2O and dried gave a carbazole dye (VIII), black-green powder, which dyes cotton from a brown-red vat olive-green tints of remarkable fastness properties. A similar dye was prepared in exactly the same manner by using 1-amino-5-benzamidoanthraquinone (IX). 4-(2-Anthraquinonylamino)-2-(o-chlorophenyl)-6,7-phthaloylquinazoline 2, prepared from III and 2-aminoanthraquinone (X), condensed in the usual manner with VI 1 part, and the resulting anthrimide carbazolized and then oxidized in the usual manner gave a dark-brown product which dyed cotton from a violet-brown vat khaki-brown tints. III 8.1 condensed with IX 6.8 parts, and the resulting 4-(5-benzamido-1-anthraquinonylamino) analog (XI) of III condensed with IX				

27/09/2004

10071390

L8 ANSWER 119 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 yielded 2-[2-(5-benzamido-1-anthraquinolylamino)-phenyl]-4-(5-benzamido-1-anthraquinolylamino)-6,7-phthaloylquinazoline. Further treatment with AlCl<sub>3</sub>-NaCl-SO<sub>2</sub> followed by oxidn. with Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> gave a brown powder which dyed cotton from a red-brown vat yellow-brown tints.

V 2.5 and 1-aminoanthraquinone (XII) 0.8 part condensed, cyclized, and oxidized in the usual manner gave a product which dyed cotton from a Bordeaux-red vat olive tints. 3-Chloro-2-naphthyl analog of III 3.5, prepd. from 2-(3-chloro-2-naphthoylamino)-3-anthraquinonenitrile and

PCl<sub>5</sub>, condensed in PhOH and PhNO<sub>2</sub> with IV 2.5 parts gave the 2-(3-chloro-2-naphthyl) analog of V, dyed cotton from a red-violet vat fast green tints. The dye 2.1 condensed with VI 1 part and the resulting black-green solid carbazolized and oxidized in the usual manner gave a

dye which dyed cotton from a Bordeaux-red vat olive tints. 2-(3-Bromophenyl) analog (XIII) 8 of III condensed in PhOH and PhNO<sub>2</sub> with IX 6.1, and the resulting 4-(5-benzamido-1-anthraquinolyl-amino)-2-(m-bromophenyl)-6,7-phthaloylquinazoline (XIV) condensed with IX, carbazolized, and oxidized yielded a dye which dyed cotton from an orange-brown vat pure red-brown tints. 2-(3-Bromophenyl) analog (XV) of V 7.5 (prepd. by the

condensation of XIII with IV) condensed in the usual manner with IX 3.8 parts, and the resulting olive product cyclized and oxidized in the usual manner gave a dye which dyed cotton from a violet-brown vat fast khaki tints. XV and

VI gave similarly a black-green anthrimide which carbazolized in the usual manner gave an olive dye. XV condensed with XII gave a green-black anthrimide which dyed cotton from a red-brown vat fast olive tints; further carbazolizing and oxidizing gave a khaki dye. XV and 1-amino-4-methoxyanthraquinone gave similarly a black-green anthrimide, dyeing cotton from a red-brown vat bottle-green tints, which carbazolized in the usual manner at 100° yielded a khaki dye. XV 3 condensed with 4-amino-1,9-isothiazoleanthrone (XVI) 1 part gave a green-khaki dye, which cyclized and oxidized in the usual manner yielded an olive dye. By using the 5-amino deriv. of XVI instead of XVI the final product obtained dyed cotton from a red-brown vat brown-olive tints. XV 7.5 condensed

with aminodibenzanthrone 4.7 parts and aftertreated in the usual manner gave a dye which dyed cotton from a black-blue vat powerful greenish olive tints.

XIII 8 and X 4 gave in the usual manner the 4-(2-anthraquinolylamino) analog (XVII) of XIII, brown solid. XVII 3 condensed with IX 1.7 parts gave a dark-brown powder which cyclized and oxidized gave a red-brown

dye. XIII 5 condensed in the usual manner in PhOH and PhNO<sub>2</sub> with 4-amino-2,1(N)-1',2'(N)-anthraquinonenaphthacridone 4.3 parts, and the resulting dark-green product 3 parts condensed in turn with IX 1.4 parts gave a black-olive anthrimide, which dyed cotton from a red-brown vat greenish olive tints and gave aftertreated in the usual manner a khaki dye. A similar anthrimide was obtained by using VI instead of IX. The product is cyclized and oxidized to a green-olive dye. XIII 5 and 4-amino-2,1(N)-1',2'(N)-3'-phenoxyanthraquinonebenzacridone 4.8 gave a dark-green anthrimide which condensed with VI gave a black-green product dyeing cotton from a red-brown vat greenish olive tints. Further

L8 ANSWER 119 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 treatment with AlCl<sub>3</sub>-NaCl at 160-5° and then with Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> gave a dye which dyed from a red-brown vat fast khaki tints. A similar product was obtained with IX instead of VI. XV 7.5 condensed in the usual manner with 4-amino-2,1(N)-anthraquinonebenzacridone 3.5 parts gave a dark-green solid (XVIII) which dyed cotton from a violet-brown vat greenish olive tints. XVIII was also obtained directly from 1 mol XIII with 2 mol IV. XVIII carbazolized with AlCl<sub>3</sub>-NaCl-SO<sub>2</sub> at 95-100° and then oxidized with Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> gave a dye which dyed fast, strong olive tints of

remarkable fastness properties from a cold or hot Bordeaux vat. XIII condensed first with the 5'-chloro deriv. of IV and then with VI gave a black-green product which yielded in the usual way an olive dye. XV 7.5 gave in the usual manner with 5-amino-1,1'-dianthrimide 4.5 parts a dark product

which dyed cotton from a red-brown vat olive-green tints and gave on carbazolization and oxidn. a brown-khaki dye. 4-Amino-1,1'-dianthrimide gave in exactly the same manner an olive-green dye. XIII 4.5 condensed with 3-amino-pyrene 2.4 parts in PhNO<sub>2</sub> and PhOH gave

1-[2-(3-bromophenyl)-6,7-phthaloyl-4-quinazolylaminolpyrene (XIX), brown solid. IX 4 condensed with VI 2.3 parts and the product carbazolized and oxidized in the usual manner gave a dye which dyed cotton from a red-brown vat brown tints. XIII 4 condensed with PhNH<sub>2</sub> 2 parts gave a brown powder. Two parts of

the product condensed in the usual manner with IX 1.4 parts, and further carbazolized and oxidized yielded a red-brown dye. A brown dye was obtained similarly by treating III with o-ClC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, and then treating

the orange intermediate with 2 mol IX, followed by the usual aftertreatment. Condensation product 7.5 from IV and 2-(4-bromophenyl)-4-chloro-6,7-phthaloylquinazoline (XX) condensed with VI 3.8 parts and the dark

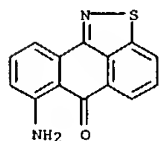
product aftertreated in the usual manner gave a dye which dyed cotton from a red-brown vat greenish olive tints. The condensation product from XX and IV gave similarly with IV instead of VI an olive-green dye. The condensation product from 2-(4'-bromobiphenyl)-4-chloro-6,7-phthaloylquinazoline (XXI) and IV condensed with IX gave an anthrimide, dark powder, which dyed green-olive tints from a red-brown vat and which gave by the usual aftertreatment a green-olive dye. The carbazolization can also be carried out with 100% H<sub>2</sub>SO<sub>4</sub> during several hrs. at room temp. or with AlCl<sub>3</sub> in PhNO<sub>2</sub> at 50-5° during 1 h. The condensation product 6 from XXI and IV gave with VI 2.6 parts an olive-green dye which yielded by the usual aftertreatment a dye dyeing cotton from a red-brown vat full olive-green tints of remarkable fastness. An example for dyeing cotton with VIII from a Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> vat is given.

IT 6337-02-6, 6H-Anthra[9,1-cd]isothiazol-6-one, 7-amino-6337-00-4, 6H-Anthra[9,1-cd]isothiazol-6-one, 5-amino-(dyes from)

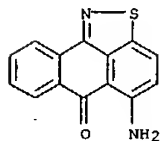
RN 6337-02-6 CAPLUS

CN 6H-Anthra[9,1-cd]isothiazol-6-one, 7-amino- (8CI, 9CI) (CA INDEX NAME)

L8 ANSWER 119 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 6937-00-4 CAPLUS  
 CN 6H-Anthra[9,1-cd]isothiazol-6-one, 5-amino- (9CI) (CA INDEX NAME)



L8 ANSWER 120 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1947:33205 CAPLUS  
 DOCUMENT NUMBER: 41:33205  
 ORIGINAL REFERENCE NO.: 41:6662g-i, 6663a-h, 6664a-b  
 TITLE: The acute toxicity of thioureas and related compounds to wild and domestic Norway rats  
 AUTHOR(S): Dieke, Sally H.; Allen, George S.; Richter, Curt P.  
 CORPORATE SOURCE: Johns Hopkins Med. School, Baltimore, MD  
 SOURCE: J. Pharmacol. (1947), 90, 260-70  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB cf. C.A. 39, 2811.8. The object was to find a practical rodenticide. Tests of acute toxicity to Norway rats were made with 196 N-containing compds., the majority of them related in some way to thiourea. The effects of a few of the more toxic compds. are described. The acute toxicity of thiourea is enhanced when a single aromatic radical is attached to one of the N atoms. The previously known 1-naphthylthiourea is the outstanding example. When there are 2 or more substituents, either on the same or on both N atoms the acute toxicity is decreased, and it is also decreased when substitution occurs on the S atom, forming a pseudothiurea, or when the S atom is replaced by an imido group to form a

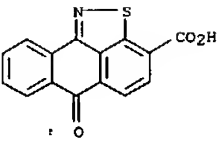
guanidine compound The compds. studied were the following 1-substituted thiourea derivs: ethyl, acetyl, 4-morpholinylmethyl, butyl, allyl, isopropyl, methyl, dodecyl, 2-chlorophenyl, o-tolyl, 2-methyl-3-chlorophenyl, 1-naphthyl, 2-biphenyl, phenyl, 4-chlorophenyl, 3-chlorophenyl, 4-bromophenyl, 2-naphthyl, 4-methoxyphenyl, 4-biphenyl, 4,4'-biphenylenebis, 2,5-dichlorophenyl, 2-methoxyphenyl, tetrahydro-2-naphthyl, benzoylguanyl, and phenylthioureido; dithiobiuret; 1-phenyl-2,4-dithiobiuret; the following 1,3-disubstituted thiourea derivs.: dibutyl, diisopropyl, diallyl, dicyclohexyl, bis(2-methylcyclohexyl), polyhexamethylene, diisobutyl, dioctadecyl, alkyldodecyl, 2-hydroxyethyl(4-ethoxyphenyl), p-phenylenebis(allyl, butylphenyl, dodecylphenyl, allylphenyl, allyl-p-tolyl, (2-hydroxyethyl)phenyl, allyl (4-nitrophenyl), phenyl-o-tolyl, di-m-tolyl, phenyl(1-naphthyl), (4-ethoxyphenyl)-[4-(2-dimethylaminoethoxy)phenyl] (and hydrochloride), p-phenylenebis(phenyl bis(2-chlorophenyl), bis(3-chlorophenyl), bis(4-chlorophenyl), bis(2-methoxy-5-methylphenyl), di-1-naphthyl, di-2-naphthyl, di-o-tolyl, bis(4-fluorophenyl), and bis(3-(trifluoromethyl)phenyl); thiocarbanilide; 2-imidazolidinethione; 5-chloro-2 (3)-benzimidazolethione; 2-thiouracil; 4-o-tolylthiosemicarbazide; 1,3-di-2-pyridylthiourea; 1,4-diphenylthiosemicarbazide; 1-ethylidenethiourea; 1,1-dibenzylthiourea; 1,1-diethyl-3-cyclohexylthiourea; 1,1-diethyl-3-phenylthiourea; 2-(dimethylthiocarbamyl)-2(3)-benzothiazolethione; 3-(diethylthiocarbamyl)-2(3)-benzothiazolethione; 3-(diethylthiocarbamyl)-6-methyl-2(3)-benzothiazolethione; 2-(2-benzothiazolylmethyl)-3,3-diethylthiopseudourea-HCl; 2-benzylthiopseudourea-HCl; 2-(4-nitrobenzyl) thiopseudourea-HCl; 2-methylthiopseudourea-H<sub>2</sub>SO<sub>4</sub>; 2-methyl-1,3-diphenylthiopseudourea; 1-(dithiocyanatomethylene)-3-cyanoguanidine; aminoguanidine-H<sub>2</sub>SO<sub>4</sub>; 1,3-diphenylguanidine; 1,3-di-o-tolylguanidine; nitroguanidine; 1,1,3-triphenylguanidine; carbamylguanidine -H<sub>2</sub>SO<sub>4</sub>; 4-(phenylthioacetyl) morpholine; 3-cyclohexane-1-thiocarboxamide; 1-naphthylthioacetamide; β, β'-thiobis(thiopropionamide); thioformamide (tech.); N,N'-diphenylthiothiocarboxamide (PhNH(PhN)CCSNH<sub>2</sub>); 4-bromothioformamide; 4-chlorothioformamide; phenyl thionocarbamate;

27/09/2004

10071390

L8 ANSWER 120 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
thioacetanilide; dithiooxamide; thioacetamide; 2-mercapto-4-ethyl-2-thiazoline; 2-mercapto-4,4-dimethyl-2-thiazoline;  
2-mercapto-5,5-dimethyl-2-thiazoline; 2-mercaptobenzothiazole, 2-mercapto-5,6-dihydro-1,3,4-thiazine; 2-mercaptothiazoline; 4-methyl-2-aminobenzothiazole-HCl; 1,9-isothiazoleanthrone-2-carboxylic acid (6-oxo-6-anthr[9,1]isothiazole-3-carboxylic acid); 2-amino-5,6,7,8-tetrahydronaphthothiazole-HCl; 2-(4-nitrobenzamido)-6-nitrobenzothiazole; 2-mercapto-4-methyl-5-chlorobenzothiazole; cyclohexanesulfonamide; 4-(dimethylamino)aniline-HCl; tetrahydro-2-naphthylamine-HCl; dithioammelide; thioammelide; benzenearsonic acid; 3-coumarincarboxylic acid; aniline; isoperthiocyanic acid; 1-naphthylamine; N-ethylaniline; phenylacetone; m-toluidine; 4-biphenylhydrazine; dicyanodiamide;  
Na dithiocarbamate; Zn dimethyldithiocarbamate; bis(dimethylthiocarbamyl) monosulfide; bis (dimethylthiocarbamyl) disulfide; bis(1-piperidylthiocarbamyl) tetrasulfide; piperidinium 1-piperidylthiocarbamate; adipamide; caprolactam; trichloroacetamide; carbanilide; Et 1-naphthylcarbamate; ammonium sulfamate; N,N-dimethyl-p-toluenesulfonamide; barium diphenylamine sulfamate; 2-acetamidophenol; N,N'-dimethylcarbanilide; p-phenetyleurea; hydrazine sulfate; 4-bromophenylhydrazine-HCl; 4,4'-biphenylenedihydrazine-di-HCl; phenylhydrazine-p-sulfonic acid; ethylenediamine-di-HCl;  
1,6-hexanediamine hydrochloride; 1,10-decanediamine; piperazine hexahydrate; 1,4-diphenylpiperazine hydrochloride; dodecylamine thiocyanate; 4-biphenylamine; benzidine; 2-aminoresorcinol-HCl; arsanilic acid; p-phenylenediamine; o-toluidine; 4-aminophenol; 3- and 4-nitroaniline; 4-nitroaniline-2-sulfonic acid; N,N'-diphenylethylenediamine; 4-(benzylamino)phenol; p-bis(dimethylamino)benzene; p-dimethylaminophenol oxalate; N,N'-disalicylideneethylenediamine;  
N,N-dimethyl-1-naphthylamine;  
N,N-dibenzyl-4-aminophenol; 4-dimethylaminobenzaldehyde;  
4,4'-methylenebis[N,N-dimethylaniline]-4,4'-bis(dimethylamino)benzohydrol; auramine; 4-(benzylideneamino)phenol; N,N-dimethyl-4-bromoaniline; N,N-dimethyl-o-toluidine; pimelonitrile; adiponitrile; C-aminocapronitrile; sebaconitrile; 8-aminocapronitrile; laurionitrile; 2-nitro-2-methyl-1,3-propanediol; resorcinol; 2,4-dinitrophenol; tribromophenol; 4-chloro-m-cresol; 3-nitrosalicylic acid; methyl pentachlorophenyl ether; isoamyl pentachlorophenyl ether; coumarin; butadiene cyclic sulfone; cinchophen; carbazole; and cyanuric acid.  
IT 82-63-3, 6H-Anthra[9,1-cd]isothiazole-3-carboxylic acid, 6-oxo- (toxicity to rats)  
RN 82-63-3 CAPLUS  
CN 6H-Anthra[9,1-cd]isothiazole-3-carboxylic acid, 6-oxo- (8CI, 9CI) (CA INDEX NAME)

L8 ANSWER 120 OF 120 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



27/09/2004

10071390

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY

TOTAL  
SESSION

FULL ESTIMATED COST

293.43

761.20

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE  
ENTRY

TOTAL  
SESSION

CA SUBSCRIBER PRICE

-42.70

-42.70

STN INTERNATIONAL LOGOFF AT 16:26:09 ON 27 SEP 2004